

Wth Sam^l H^l Smith

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- | | |
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 Seaman's Midwife's Monitor,
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 Shipmaster's Medical Assistant
 Smellie's Anatomical Tables,
 Smith's Revolutions of Chemistry
 Spallanzani's Dissertations,
 Struve on the Physical Education
 of Children, by Willich,
 Struve on Suspended Animals
 Swediaur on the Venereal,
 Sydenham's Works, 8 vols.

AMERICAN REVIEW,

AND

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Vol. 2.] For July, August, and September, 1802. [No. 3.

ART. I. *Transactions of the American Philosophical Society, held at Philadelphia, for promoting useful Knowledge. Vol. v. 4to. pp. 328. Philadelphia. Dobson. 1802.*

THE *fourth* volume of the *Transactions* of this Society appeared in 1799:* the publication of another in so short a time is a proof that its members are not inattentive to the objects of their association.

The introductory pages of this volume contain an account of the *rules* established in the choice of papers for publication; a list of the several *premiums* offered by the society; a circular letter, inviting attention to the *natural history* and *antiquities* of America; a list of the officers of the society, and members elected since 1798, and of the *donations* made since that time.

The whole number of papers included in this volume are twenty-three, which will be successively examined under distinct heads.

Those relating to CHEMISTRY and *experimental philosophy* are as follow:

Experiments on the Transmission of Acids and other Liquors, in the Form of Vapour, over several Substances, in a hot Earthen Tube. By Dr. JOSEPH PRIESTLEY.

This paper contains some experiments in addition to those which the learned author had formerly published on the transmission of steam, and also of acids in form of vapour, over substances of various kinds in hot earthen tubes.

He here states the results of sending the vapour of spirit of nitre over iron, copper, charcoal, lead, tin, and bismuth. He

* See Monthly Magazine and American Review, vol. i. p. 365.

likewise tried the sending of the vapour of marine acid over copper, through an empty earthen tube glazed only on the outside, and over perfect charcoal; also the transmission of the vapour of caustic fixed alkali over iron included in an earthen tube.

He next gives an account of the effects produced by dissolving charcoal, copper, phosphorus, and animal fibres, in the nitrous acid.

The remainder of the communication consists of miscellaneous experiments. 1. On the colouring of the solution of copper in volatile alkali, and of various substances in the marine acid. 2. On the production of sulphur by heating water impregnated with vitriolic acid air. 3. On the production of a *liquor silicum* from a solution of caustic alkali and pounded glass, aided by heat, in Papin's digester. 4. On phosphoric air. 5. On the purity and impurity of airs in various circumstances. 6. On the proportion of latent heat in some kinds of air. 7. Experiments relating to aqua-regia, and the solution of gold and platina in it. 8. Experiments to ascertain the different effects of phlogisticated and dephlogisticated nitrous acid in the solution of mercury. 9. Experiments to ascertain the amount of weight which quick-lime gets by exposure to the air, and the time requisite to obtain it. 10. Experiments on a pyrophorus made of sulphur and iron. 11. On the absorption of fixed air by a mixture of iron-filings and sulphur.

Experiments relating to the Change of Place in different Kinds of Air, through several interposing Substances.

By Dr. JOSEPH PRIESTLEY.

In order to prevent mistakes of considerable consequence in conducting pneumatic inquiries, it is proper that the experimenters should be apprized of the facts disclosed in this interesting communication.

The author, having procured earthen vessels of a very close texture, so as to be apparently impervious to air, and containing about an ounce measure, filled them with any particular kind of air, and then placed them inverted in a large glass jar containing a different kind of air. He then heated the small earthen vessels through the glass jar by means of a burning lens, and never failed to find, after the experiment, that the air within the earthen vessel was the same with that which had been on the outside of it, while that within it was mixed with that on the outside; but in some cases the mixture was a chemical one, forming a kind of air different from

either of them, while at other times they were only diffused through one another.

Experiments relating to the Absorption of Air by Water.

By Dr. JOSEPH PRIESTLEY.

This phenomenon first attracted the notice of the author in his attempts to ascertain the proportion between the phlogisticated and dephlogisticated air which constitute the atmosphere. Having made one of his computations from the diminution of atmospherical air by a mixture of nitrous air, he observed, that, by long standing, this diminution proceeded much farther than at the first, and he concluded that this further diminution was occasioned by the same cause as the first, only operating more slowly. But having afterwards satisfied himself that this diminution of air, and its final absorption, were altogether independent of the action of nitrous air, he exposed in the same manner all kinds of air that could be confined by water to the same influence; and he always found that, in more or less time, the whole of any quantity would be totally absorbed. He found, however, that dilatation by an air-pump prevented the absorption, and compression by a condensing machine rather promoted it.

Miscellaneous Experiments relating to the Doctrine of Phlogiston. By Dr. JOSEPH PRIESTLEY.

It is well known that Dr. Priestley has never hitherto been so well satisfied with the doctrines of the new chemistry as to relinquish his old principles. In this paper he states a number of experiments intended either to explain and support some of his principal objections to the antiphlogistic theory, or to vindicate some of his reasonings on this subject, which had been replied to by his opponents.

Experiments on the Production of Air by the freezing of Water. By Dr. JOSEPH PRIESTLEY.

It appears, by these experiments, that water, exposed to the alternate process of freezing and thawing, always afforded a portion of air. With an appropriate apparatus, very ingeniously devised to allow the escape of the air formed from the water, and, at the same time, to prevent the admission of atmospherical air, our author repeated the process of freezing nine times without changing the water, and the last portion of air that he procured in this manner was as great as any of the preceding; so that there remained no reasonable doubt but that air might be produced from the same water in this manner *ad libitum*. The air thus obtained was found, on examination, to be wholly phlogisticated.

Dr. Priestley rejects the antiphlogistic doctrine of the composition of water. He seems to suppose that water is the basis of every kind of air, and that the difference between the various airs depends upon the addition of certain imponderable substance.

Experiments on Air exposed to Heat in Metallic Tubes.

By Dr. JOSEPH PRIESTLEY.

These experiments may be regarded as a counterpart of those made upon air heated in earthen tubes. The facts are remarkable, and well deserve to be recorded; though they are, perhaps, referable to no known theory. The author treats, 1. Of a mixture of dephlogisticated and inflammable air not exploding in a red heat. 2. Of the transmission of air through the substance of several metallic tubes.

To the experiments above mentioned, Dr. Priestley adds many others designed to ascertain the nature and constitution of phlogisticated air, and the readiest modes of procuring it in a pure state.

It is proper to add, that we are informed by the illustrious author of these papers, that many of the most important experiments recited in them were made with a burning lens of sixteen inches diameter, with which he was generously furnished by Mr. Parker, who has so greatly distinguished himself by his improvements in the art of grinding glass. To the liberality of that gentleman in supplying our author with various vessels made of glass, according to his own declaration, the public are indebted for a great proportion of his other experiments on air.

Memoir on the Analysis of Black-Vomit. By Dr. ISAAC CATHRALL.

The zeal and intrepidity displayed in this inquiry are deserving of particular commendation. The terror which surrounds the subject would have induced most people to abandon the investigation of it, or would only have permitted a mode of experimenting so slight and superficial as to lead to no satisfactory results. None of these apprehensions deterred Dr. C. from a thorough examination of the matter of black-vomit. He not only subjected it to an accurate chemical analysis, but personally ascertained all the qualities of it discoverable by taste and smell.

In the first place, the author gives a description of the matter of black-vomit, which he supposes to be of two kinds—one consisting of a number of black flaky particles, resembling the grounds of coffee—the other of a dark-coloured in-

spissated mucus. After exhibiting a particular account of the appearances of each kind, discriminating them as far as possible, and stating the circumstances which precede, accompany and follow the discharge of them, he proceeds to offer an analysis of the fluids ejected a few hours before the commencement of black-vomiting. This being done, the author presents an analysis of the matter of black-vomit itself, which is executed in a course of appropriate, numerous and accurate experiments. These are succeeded by a number of experiments to ascertain the effects of black-vomit on the living system, which are so interesting that we shall lay them before the reader in the words of our author.

“ From the internal surface of the stomach and intestinal canal appearing, on dissection, inflamed and sphacelated, particularly in some patients who had vomited black, it has been believed that the black-vomit was corrosive, and had a power of acting on parts it came in contact with. This power has likewise been inferred from some patients complaining of a soreness in their throats, immediately after the ejection of this black matter.

“ To determine how far it was capable of acting on the healthy body, it was submitted to the following experiments:

“ 1st. In October, 1794, immediately after a quantity of black-vomit was taken out of the stomach after death, I applied some of it to my tongue and lips; to the latter it gave, a short time after application, the sensation of a fluid perceptibly acrid. This experiment was, the next day, several times repeated, with the same result.

“ 2d. A friend of mine applied it to his lips, and it produced a similar sensation, but would not affect his tongue.

“ 3d. Finding the effects of this matter so different from what was expected, I began to believe that this discharge varied materially in point of activity, in different patients; but, on subjecting the black-vomit, procured from a number of persons, to the same test, it produced the same effect.

“ 4th. Two ounces of a fluid, resembling chocolate, was obtained, which was vomited a few hours before death. This was applied in the same manner; but there could not be perceived any difference in the result.

“ 5th. In the beginning of October, 1799, Mr. Joseph Parker, an active and intrepid member of the board of health, obligingly presented me with five ounces of black-vomit, obtained from the physicians of the City-Hospital. Some of this I applied to my tongue in his presence, but could not perceive the least corrosive effect. When this fluid was applied to the skin, on different parts of the body, it produced no

other effect than what water did of the same temperature. I have often immersed my hand in black-vomit, immediately after it was discharged from the stomach, and whilst it was warm, without exciting the least uneasy sensation in the skin.

“(a) October 4th, 1799, three cats were confined in a room, and fed with beef, which had a considerable quantity of the flaky substance of the vomit inserted into it. This manner of feeding was continued until they had eaten one drachm and a half of the flaky substance, and had drunk several ounces of the black-vomit. On the 5th the excretions of the bowels were of a dark colour; yet there could not be discovered any difference in their health; but, from their being strangers to each other, they had a constant propensity to combat. This malicious spirit continued until the 20th, when they were dismissed in good health.

“(b) A large dog was confined in a room, and, by an assistant, his jaws were forced asunder, and he was compelled to swallow an half pint of black-vomit. The following day the excretions by the bowels were fluid, and of a black colour; but there could not be observed the least alteration in his health, from the time of making the experiment until he was dismissed, which was about three weeks after.

“(c) Two full grown fowls were confined, and fed with bread steeped in black-vomit for twelve days. This, Mr. Parker, as well as myself, observed, they ate with great avidity; but it had no evident bad effect upon their health; for they continued as well after as they were before the experiment, and seemed to give the preference to that kind of food to every other which was presented to them, and they appeared to thrive equally as well as if they had been fed upon corn.

“(d) On the 3d of October, 1799, in a small yard adjoining the house in which I live, several ounces of the black-vomit, recently obtained, were evaporated over a moderate heat, in order to obtain the flaky substance. During this experiment, Mr. Parker held his head over the vessel for some minutes, so as to inhale the steam of black-vomit; after which we continued within two yards of the vessel, without experiencing any unpleasant effect.

“(e) The following day I caused the windows and doors of a room to be closed, and the same experiment was repeated on a sand-bath, constructed in the middle of a room. The fluid was evaporated until the atmosphere was so impregnated with the effluvia of the vomit as to render the apartment extremely unpleasant, not only from the odour of the vomit, but the warmth of the room. In this atmosphere I remained an hour; during which I had a constant pro-

pensity to cough, and had, at times, nausea and inclination to vomit; but, after walking out in the air, these effects gradually subsided. I experienced, however, a sense of weariness at my chest for many hours after.

"From the above experiments, it appears that the black-vomit, when applied to the most sensible parts of the body, produced little or no effect.

"Secondly, it appears that large quantities of this fluid may pass through the stomach and bowels of quadrupeds, and other animals, without apparently disturbing digestion, or affecting their health. This fact incontestibly proves the inactivity of this fluid, and renders it probable that the speedy death which ensues, after this discharge in yellow fever, is not from the destructive effects of this matter on the stomach and bowels, but, most likely, from the great degree of direct or indirect debility which had been previously induced, on which the black-vomit is sometimes an attendant, and strongly expresses the great danger to be apprehended from the enervated state of the system.

"Lastly, several of the experiments tend, in some measure, to prove, that an atmosphere highly impregnated with the odour of black-vomit, recently obtained, would not produce fever, apparently under the most favourable circumstances."

As to the source of the matter of black-vomit, Dr. C. supposes it to be a vitiated secretion from the liver, and supports the opinion by a variety of ingenious reasoning. But, in our judgment, the propriety of this opinion may well be doubted. We are disposed to believe that it is more commonly a diseased secretion from the inflamed vessels of the stomach and intestines. It is well ascertained that the matter of black-vomit has been plentifully found in the stomach by dissection, when no such matter was to be seen in the gall-bladder or biliary ducts.

Observations on the Soda, Magnesia and Lime contained in the Water of the Ocean; showing that they operate advantageously there, by neutralizing Acids, and, among others, the Septic Acid; and that Sea-Water may be rendered fit for washing Clothes without the Aid of Soap. By SAMUEL L. MITCHILL, of New-York.

It is a great desideratum in nautical economy, to contrive a cheap, easy and convenient mode of washing the clothes, bedding, &c. of seamen while they remain at sea. Ocean-water is unfit to dissolve soap; fresh water cannot generally be procured in sufficient quantity; and, of consequence, the seaman is often prevented from changing his dress so fre-

quently as health and decency require. To obviate this difficulty is the main object of the paper now under examination; a brief recapitulation of which we now offer to our readers in the words of the author.

“ The general inferences from the whole of the preceding reasoning are these: 1. Alkaline substances, such as magnesia, and more powerfully lime and soda, are plentifully distributed through the ocean, to keep it from becoming foul, unhealthy and uninhabitable, which doubtless would be the case if the sulphuric, septic and muriatic acids abounding in it were not neutralized. 2. Where either of these acids is but imperfectly saturated, as happens when they are united to magnesia and lime, they decompose soap, let loose its grease, and become unfit for washing by aid of that material. 3. If soda or barilla is added to ocean-water in sufficient quantity, and the water lixiviated or alkalized, the earths will, of course, be precipitated, and the acids neutralized. 4. In this state dirty linen may be cleansed in it, and men at sea be thus enabled to have their clothes washed without the aid either of soap or of *fresh* water. 5. For this purpose, a quantity of barilla or soda should always be provided as an article of the ship's stores, and issued to the men on washing days. 6. Thus, by the operation of this alkaline salt, a great proportion of the nastiness and infection bred in the clothes, bedding and births of persons at sea might be prevented, and the crews and passengers so far forth preserved from fevers and dysenteries. 7. No more room would be occupied by water-casks in the holds of vessels than at present. 8. The small quantity of magnesia and lime adhering to clothes washed in this way, is an advantage over and above what takes place in using fresh water. And, 9. A broad and noble view is opened of the economy of Providence in distributing alkaline salts and earths so liberally throughout the terraqueous globe.”

The papers which may be denominated *astronomical* and *mathematical* are—

Astronomical and Thermometrical Observations made at the Confluence of the Mississippi and Ohio Rivers. By ANDREW ELLICOTT.

Astronomical and Thermometrical Observations made on the Boundary between the United States and his Catholic Majesty. By ANDREW ELLICOTT.

These two papers, comprising 150 pages, fill nearly one half of the volume. They contain a minute account, in the form of a journal, of all the observations made by this able and indefatigable astronomer and surveyor during his voyage

to *Natchez*, and while he was employed in ascertaining the boundary line between the United States and Spain, agreeably to the late treaty between the two countries.

This mode of fixing the limits of different jurisdictions seems in some degree peculiar to America. Accident or convention appears to have led to the adoption of the natural boundaries of mountains and rivers among the States of Europe.—To determine this mathematical line, great difficulties must have occurred in carrying on a series of astronomical and geometrical operations in a wild and uncultivated country, and through trackless forests and morasses; but all obstacles appear to have been happily surmounted by the address and perseverance of Mr. Ellicot, and the persons engaged with him.

The nature of these observations will not permit any analysis or abridgment of them.—They are of value in relation to the subject, and may be worthy of preservation in the Transactions of the Society; but can interest only a few. The curious reader will look to the volume itself, where he will find *plates* illustrating the different observations.

The confluence of the Ohio and Mississippi was found to be in longitude 88 deg. 50 min. 42 sec. west from Greenwich, and 13 deg. 41 min. 57 sec. west from Philadelphia.

The longitude of *Natchez* was ascertained to be 91 deg. 29 min. 16 sec. west of Greenwich, and 16 deg. 15 min. 46 sec. west of Philadelphia; and its latitude 31 deg. 33 min. 48 sec. north.—*New Orleans*, by the observations of Mr. E. is in longitude 90 deg. 14 min. west from Greenwich, and 15 deg. 5 min. 15 sec. west of Philadelphia; its latitude is 29 deg. 57 min. 28. sec. north.

Observations on the Figure of the Earth. By JOSEPH CLAY, M. A. P. S.

The design of these observations is to refute, by mathematical demonstration, the assertion of the Abbe De St. Pierre, that the earth is a *prolate spheroid*. The want of the *diagrams* to which to refer, prevents our gratifying our mathematical readers with an extract of this demonstration.

Mr. C. observes, that the error of St. Pierre “arises from his supposing, that degrees of latitude are measured by the angles of semi-diameters of the meridian; whereas, the only mode of determining the latitude is by observing the altitude of the heavenly bodies, either by the mural quadrant or sector, or Hadley’s octant.”

A Description of a newly invented Globe Time-Piece. By the Rev. BURGISS ALLISON, A. M.

Considerable ingenuity is displayed in the mechanism of this time-piece. The problems which it solves are, 1. The hour and minute of the day. 2. The hour and minute of sun-rising and sun-setting. 3. The different seasons, and lengths of day and night. 4. The sun's place in the ecliptic, and day of the month. 5. The phases of the moon.—As the description cannot be well understood without the plate, we shall refer the reader to the volume for a particular account of this machine.

A Description of the Pendant Planetarium. By BURGISS ALLISON.

For the reason just mentioned, we forbear attempting a description of this piece of mechanism, which would not be satisfactorily comprehended without a reference to the engraved figures.

On the Use of the Thermometer in Navigation. By WILLIAM STRICKLAND.

This paper is accompanied with a *thermometrical journal* of the temperature of the atmosphere and the sea, kept by the author during a passage from Hull, in England, to New-York, in 1794; and with a *chart* of the voyage.

It is well known that a current, produced by the *Gulf-Stream*, flows in an easterly and southerly direction towards the coasts of Europe and Africa. Mr. S. supposes a similar current regularly sets across the Atlantic northerly towards the coast of Ireland and the Hebrides, and which has been hitherto unnoticed. This current he considers as a branch of the Gulf-stream, which being warmer than the ordinary temperature of the sea, may be discovered by an attentive use of the thermometer. The existence of such a current is rendered further probable by the fact, that tropical substances have been found cast on those northern shores. When its existence and direction are well ascertained, advantage may be taken of this knowledge in shortening the voyages to and from Europe. On approaching the banks of Newfoundland, and in its vicinity, the thermometer fell 20 degrees, and rose 9 degrees on passing to the east in the same longitude, and striking the supposed branch of the Gulf-stream. The fall of the thermometer was afterwards uniform, until they approached the coast of Europe in the outward voyage. In returning, 20 degrees difference was found to exist by the thermometer when near the bank, and when in the ocean not far to the east of it.

On *Natural History* we have the following papers:

On the Ephoron Leukon, usually called the White Fly of Passaick River. By Dr. WILLIAMSON.

" These insects are of the order called neuroptera. Lin. Sys. Nat.

" The eyes are large and prominent.

" The stemmata are wanting.

" The wings are plain, patent, membranaceous, reticulated. The under wings shorter and narrower than the upper wings by more than one half. They are attached to the body a little behind and below the upper wings, and are nearly covered by them.

" The antennæ are cetaceous, half an inch long, having six articulations besides the base.

" From the tail there are two cetaceous appendices, about one inch and a half long. They diverge, making an angle of 12 or 14 degrees. Each of them contains 15 or 20 small knots resembling articulations.

" The tail, perhaps of the males, is furnished with two small crooked filaments hardly one-tenth of an inch in length, that are inserted below the cetaceous appendices; their points turn inward so as to form pincers.

" The length of the insect is half an inch.

" The trunk is not thicker than a grain of rye. The abdomen is much smaller.

" The wings, abdomen and legs are perfectly white.

" The eyes black; the trunk of a brownish colour.

" Their flight in speed is nearly equal to that of the dragon flies.

" Neither mouth nor feet could be described from the want of a microscope.

" They begin to rise out of the river 35 or 40 minutes after the sun sets, and continue rising about fifteen minutes.

" We have no information concerning the larvæ of those insects.

" The crysalis, in which form they rise to the surface of the water, is not distinguishable from the perfect insect in shape or colour.

" The crysalis deposits a thin white pellicle or skin on the surface of the water, and rises a perfect insect. It continues on the wing about an hour, and perishes.

" Some of them, not one in a hundred, rise from the water in the form of a crysalis. They fly immediately to the shore, and in less than a minute they creep through the white pellicle that covered the trunk, abdomen and appendices, and rejoin their companions on the wing,

"In their flight they seldom rise more than six or eight feet above the water, but they usually skim or play near the surface.

"The female drops two clusters of eggs upon the water, and perishes immediately.

"The eggs are yellow. Each cluster is nearly one quarter of an inch in length, and the thickness of a common pin, resembling the roe of a fish, and containing about 100 eggs. They sink in the water.

"As those insects are not seen to couple on the wing, it is presumed that the male fecundates the eggs when they drop on the water.

"These flies are so numerous that they appear some evenings like thick driven snow in a cloud that is hardly transparent.

"These insects, who differ in many particulars from the ephemera, are not easily reduced to any genus described by Linnæus, Geoffroy or Scheffer. They must be of the order called neuroptera, but an eighth genus is to be added to that order.

"They are natives of the river Passaick, but their utmost range on that river is not above two miles and a half. They rise about three quarters of a mile below the bridge at Belville, and one mile and a half above the bridge. Within those limits they rise without number, but no where else on the river, though there is a regular tide nine miles above the bridge, and there is not any salt water within three miles of it. They are not found, as we are told, in any of the neighbouring rivers.

"Their first appearance every year is about the 20th of July, and they continue rising every evening more or less about three weeks.

"They seek the light, for they fly in crowds to a lamp or candle; but they are supposed to be the only genus of winged insects that never see the sun.

"The insect of an hour, that is never at rest, might serve for a strong figure in the hands of a peevish philosopher."

A Drawing and description of the Clupea Tyrannus and Oniscus Prægustator. By BENJAMIN HENRY LATROBE, F.A.P.S.

There is something so curious in the mode of living of this insect here described, that we shall extract Mr. L's. account of it.

"In the month of March, 1797, illness confined me for several days, at the house of a friend on York river in Virginia, during his absence. My inability to move further than to the

shore of the river, gave me leisure to examine carefully, and in more than an hundred instances, the fact I am going to mention.

"Among the fish that at this early season of the year resort to the waters of York river, the alewife or oldwife, called the *bay-alewife* (*clupea nondescripta*) arrives in very considerable shoals, and in some seasons their number is almost incredible. They are fully of the size of a large herring, and are principally distinguished from the herring, by a *bay* or red spot above the gill-fin. They are, when caught from March to May, full-roed and fat, and are at least as good a fish for the table as the herring.

"In this season each of these alewives carries in her mouth an insect, about two inches long, hanging with its back downwards, and firmly holding itself by its 14 legs to the palate. The fisherman calls this insect *the louse*. It is with difficulty that it can be separated, and perhaps never without injury to the jaws of the fish. The fishermen therefore consider the insect as essential to the life of the fish; for when it is taken out, and the fish is thrown again into the water, he is incapable of swimming, and soon dies. I endeavoured, in numerous instances, to preserve both the insect and the fish from injury, but was always obliged either to destroy the one, or to injure the other. I have sometimes succeeded in taking out the insect in a brisk and lively state. As soon as he was set free from my grasp, he immediately scrambled nimbly back into the mouth of the fish and resumed his position. In every instance he was disgustingly corpulent, and unpleasant to handle; and it seemed, that whether he have obtained his post, by force, or by favour, whether he be a mere traveller, or a constant resident, or what else may be his business where he is found, he certainly has a *fat* place of it, and fares sumptuously every day.

"The drawings annexed to this account were made from the live insect, and from the fish out of whose mouth he was taken. I had no books to refer to then; but examining the *Systema Naturæ* of Linnæus, I was surprized to find so exact a description of the insect as follows (see Salvii editio, Holmiæ, 1763. p. 1060, also Trattner's Vienna edition, same page).

"*Insect. apt.*

ONISCUS, PEDES XIV.

Antenæ setacæ

Corpus ovale.

"O. Physodes, abdomine subtus nudo, caudâ ovatâ.

"Habitat in pelago; corpus præter caput, et caudam ultimam, ex septem segmentis trunci, et quinque caudæ. Antennæ utrinque duo, breves. Caudæ folium terminale omnino ovatum; ad latera utrinque subtus auctum duobus petiolis diphyllis, foliolis lanceolatis, obtusis, caudâ brevioribus. Caudæ articuli subtus obtecti numerosis vesiculis longitudine caudæ."

"From the particularity with which the oniscus physodes is described by Linnæus, it is evident that he had the insect before him, or a discription by an attentive observer. It appears also from the "*Habitat in pelago*," that the O. physodes, if this be the insect, is found detached from his conductor. There are a few points in which the O. physodes differs from my insect. I did not observe the antennæ, perhaps for want of sufficient attention, or of a microscope. The petioli of the tail were not, to appearance, *two-leaved*, and I am certain that the segments of the tail, and the tail itself, were without the *vesiculi longitudine caudæ*.

"There are many circumstances, to ascertain which is essential to the natural history of this insect. The fish whose mouth he inhabits comes about the same time with the chad into the rivers of Virginia from the ocean, and continues to travel upwards from the beginning of March to the middle of May. As long as they are caught upon their passage upon the river, they are found fat and full of roe. Every fish which I saw had the oniscus in his mouth; and I was assured, not only by the more ignorant fishermen, but by a very intelligent man who came down now and then to divert himself with fishing, that, in 40 years observation, he had never seen a bay alewife without the louse. The chad begin to return from the fresh water lean and *shotten*, about the end of May and beginning of June, and continue descending during the remaining of the summer months. No one attempts then to catch them, for they are unfit for the table. Whether the bay alewife returns with the chad, I could not learn, but it is certain, that after June it is not thought worth the trouble to catch them. No one could tell me *positively* whether the oniscus still continues with them, but it was the opinion of my informant, that like every other parasite, he deserts his protector in his reduced state, for he could not *recollect* that he had ever seen him in the mouth of those accidentally caught in the seine in July or August.

"I consider, therefore, the natural history of the oniscus, which I now communicate, as very imperfect; and it were to be wished that some lover of natural science would follow up the inquiry, by endeavouring to ascertain whether he continue with, or quit the fish before his return to the ocean, and also whether he be the oniscus physodes of Linnæus, *qui habitat in pelago*.

"Should he be an insect hitherto undescribed, I think he might be very aptly named *oniscus prægustator*.

"The bay alewife is not accurately described in any ichthyological work which I have seen; nor can I from my drawings, which were made with a very weak hand, venture a description. From his having a regular prægustator, I would suggest that he ought to be named *clupea tyrannus*.

"The oniscus resembles the minion of a tyrant in other respects, for he is not without those who *suck* him. Many of those which I caught had two or three leaches on their bodies, adhering so closely, that their removal cost them their heads. Most of the marine onisci appear to be troublesome to some one or other fish. The oniscus ceti is well known as the plague of whales, and many of the rest are mentioned in Linnæus and Gmelin, as *pestes piscium*."

Sur les Végétaux, les Polypes et les Insectes. Par DUPONT DE NEMOURS.

Some of the most curious and wonderful properties of vegetables and insects are here examined by Mr. D. with a lively and philosophic eye. He traces, by various analogies, a close and surprising resemblance between vegetable and animal existences. He finds in plants that regular organization and animal economy, which has been so ingeniously unfolded in Darwin's *Phytologia*. We extract a few passages as a specimen of his manner of observation.

"Nous remarquons dans les végétaux trois ou quatre principaux phénomènes, leur croissance, leur santé, leurs amours, leur reproduction; et deux espèces de vie: celle qui les fait pousser, se nourrir et s'étendre, qui nous paraît purement *végétale*: celle qui les fait aimer, *connubier*, se féconder, porter des fruits, des graines qui ont toutes les propriétés des œufs; manière d'être si active et si voluptueuse qu'elle touche presque à *l'animalité* [*l'animalité*], supposé qu'elle ne la soit pas.

"Tout près des végétaux sont certainement les Polypes; et peut-être les pucerons, les *volvox*, la plus part des insectes microscopiques séminaux ou infusatoires, qui semblent se multiplier comme les plantes, des deux façons, par la génération et par le bourgeonnement.

"Une plante est elle une sorte *d'animal* privé d'yeux, d'oreilles, et de jambes; doué, en compensation d'une multitude de bouches, de bras supérieurs et inférieurs, de mains, et d'organes reproductifs; chez qui le nombre étonnant de ses plaisirs supplée à ce qui peut dans chacune de leurs sensations, manquer de retour sur soi-même, de sel, de pointe et d'énergie? un pommier porte vingt mille fleurs, cent mille parties sexuelles du genre féminin et quatre cent mille du genre masculin, toutes, ou la plupart, en amour à la fois: qui de félicités!

"Une plante est elle une famille, une République, une espèce de *Buche vivante* dont les habitans, les citoyens, les membres ont en communauté la nutrition, mangent au réfectoire; mais où chaque fleur, et plutôt encore chaque étamine, chaque pistil, est un *Individu*, ayant son amination, ses besoins impérieux et doux, ses voluptés, son bonheur et ses souffrances à part?

“ Quand aux plantes plus faciles à voir et à manier, que les polypes il nous a été possible d'apprendre que la bourgeons, es boutures, les graines même, ne produisent que des végétaux qui demeurent long tems dans leur état que j'appellerais volontiers de *chenilles*, dans leur état d'absence de l'amour.

“ Mais enfin la plante atteint un âge qui lui fait produire des bourgeons d'une autre espèce. Pareils sous plus d'un rapport à des chrysalides, ils renferment des embrions dont la figure n'est plus la même que celle de la tige qui les porte. Ces *bourgeons-chrysalides* rompent leur enveloppe; les *fleurs* déploient, comme des ailes, leurs pétales brillantes—ce sont de nouveaux êtres. Elles ont une vie particulière, plus animée, plus exquise que celle de l'arbre ou de l'herbe qui les soutient, qu'elles décorent. Elles sont plus influencées par l'air ambiant, et réagissent plus fortement sur lui. Elles le décomposent d'une autre manière et d'une manière qui ressemble plus parfaitement encore à celle que produit la respiration des animaux dont le jeu des poulmons nous est visible.

“ La plus part des plantes absorbent l'azote et dégagent une partie de l'oxygène. Un grand nombre de fleurs s'abreuvent d'oxygène et repoussent l'azote comme l'homme lui même, et avec une si grande puissance qu'elles balancent et surpassent la consommation que tout le corps de leur plante fait pour sa nourriture de ce fluide irrespirable.

“ Cet oxygène dont les fleurs sont si avides, et dont elles se pénètrent si rapidement, en si énorme quantité pour leur petit volume, es *l'air vital* par excellence. Il les embrase, elles aiment, elles jouissent—sont-ce les amours de la plante qu'elles font? sont-ce les leurs? ce sont tous les deux. La mère ne peut être entièrement insensible au bonheur de ses enfans, d'enfans qui font partie de son propre corps.—La plante est devenue papillon; ou pour mieux dire elle s'est convertie d'une foule de *papillons-plantes* de l'un et de l'autre sexe, qu'elle a tirés de son sein, et qui semblables et presque en tout aux autres papillons, ont une vie très courte, la dépensent en voluptés sans songe à l'entretenir exhalent leur tendresse en parfume, s'occupent avec délices et sans relache de la génération; et se fanent des qu'elle est consommée laissant, . . . au fonds d'un *ovaire* . . . des *œufs* . . . fécondés et féconds.

“ Trouvez vous la parité suffisamment exacte? jugez vous encore que la distance soit incommensurable entre la nymphe, ou les nymphes d'une *mimeuse* et l'ame d'un ciron.

“ Je ne décide rien. Je ne suis qu'un enfant curieux. Je vous apporte les fleurs que j'ai cueillies, et les papillons que j'ai attrappés. Savans professeurs dites moi ce que c'est?”

A Memoir on Animal Cotton, or the Insect Fly-Carrier.

By M. BAUDRY DES LOZIERES, Member of several Academies, and Founder of the Society of Sciences and Arts at Cape-François.

The subject of this memoir is so new and curious, that we shall gratify the lovers of natural history by extracting the author's description of this remarkable insect.

"Every inhabitant of the West-Indies knows and dreads the greedy worm which devours their indigo and cassada plantations. But people have hitherto turned their attention more to the means of destroying it than of rendering it useful. It is indeed very natural to endeavour to destroy our enemy, but to compel him to be of service to us is by far the greater triumph.

"*Its Birth, Growth and Death.*—The cassada-worm is produced like the silk-worm, that is to say, from the eggs which the mother scatters every where, after she has undergone her metamorphosis into a whitish butterfly, or of a light pearl colour.

"The egg is hatched about the latter end of July. Its developement is quick, for in September the worm is changed into a butterfly.

"This month of September is the season of his loves. The constant motion of his wings shows the ardency of his passion, which he indulges day and night, and even while feeding. The excess of this indulgence soon destroys him; he dies in the same month, after violent convulsions.

"I have said that his life begins at the end of July. He is decked at his birth with a robe of the most brilliant variegated colours. This elegant livery, which nature seems to have delighted in forming, renders him always agreeable to the eye, which always dwells upon it with pleasure.

"*Its Affinities.*—It has appeared to me to be a smooth caterpillar, whose external shape is exactly like that of the silk-worm.

"It differs, however, from it, by its size, by its thickness, and by the beauty of its colours.

"It again differs from the silk-worm, because it does not itself work the cone which I am going to speak of.

"I leave it to the learned to delineate its external configuration, and to determine upon the family of insects to which it belongs. I shall only say that I do not believe it has, like the silk-worm, an intestine going in a direct line from the mouth to the anus, because it appears to me that this cause of elaboration would not have the same destination.

"*Its Food.*—It feeds on cassada leaves, of which it is ex-

tremely greedy. It feeds at all hours, day and night. It also nibbles the leaves of the potatoe: this is however but a transitory taste, it soon returns to the cassada leaf.

"I have to observe that after it has taken its food, when the time of its metamorphosis arrives, it does not purge itself by diet, like the silk worm, but continues to eat to the last moment.

"*The Approach of its Metamorphosis.*—In the month of August, and when on the point of undergoing its metamorphosis, it strips off its superb robe, and puts on one of an admirable sea-green. This fundamental colour reflects all its various shades, according to the different undulations of the animal, and the different accidents of light.

"*The Sting of the Ichneumon Fly.*—This new decoration is the signal of its tortures. Immediately a swarm of ichneumon flies assail it. I think I am not mistaken when I assert that there is not one of its pores that has not one of those flies fastened to it. There is even no necessity of making use of the microscope to see that he is covered with them.

"In vain he struggles with all his might, raises himself upright to get rid of his cruel tormentors—He must submit. Those flies, of the smallest species, and which can only be studied by means of the microscope, drive their stings into the skin of their victim, over the whole extent of his back and sides. Afterwards, and all at the same time, they slip their eggs into the bottom of the wounds which they have made.

"After having performed this dreadful operation, the ichneumon flies disappear, and the patient remains for an hour, in a drowzy and even motionless state, out of which he awakens to feed with his former voracity. Then he appears much larger, and his size increases every day. His green colour assumes a deeper hue, and the tints produced by the reflection of the light are more strongly marked. The animal in this state of factitious pregnancy, if I may so express myself, is worthy of all the attention of the observer of nature.

"I shall not undertake the description of the ichneumon fly; it is well described in the books. If I have observed a difference, it is the same which exists between the European *gnat* and the *mosquito* of hot regions, that is to say, that our West-India flies are of a lesser size.

"I have now to describe the operation which the ichneumon flies, which are extremely small, perform at the very moment of their coming into the world; you will judge, gentlemen, whether this expression is accurate.

"*Animal Cotton.*—A fortnight after the ichneumon flies have cruelly deposited their eggs by perforating the unfortunate cassada-worm, that is to say, sometime in the month of August,

those eggs may be seen by the help of a microscope, hatching on the body of that animal.

" Those eggs are all hatched at the same moment, and it is impossible to catch the moral point of time which may intervene between the birth of one and that of another. At one glance, the cassada-worm is seen covered with all the little worms that have just been hatched. They issue out of him at every pore, and that *animated robe* covers him so entirely, that nothing can be perceived but the top of his head. He then turns to a dirty white; the little worms appear black to the eye, but their true colour is a deep brown.

" This operation lasts hardly more than an hour, and is followed by another which is not much larger [*longer*], but which is much more curious.

" As soon as the worms are hatched, and without quitting the spot where the egg is which they have broke through, they yield a liquid gum, which, by coming into contact with the air, becomes solid and slimy.

" At the same time, and by a simultaneous motion, they raise themselves on their lower extremity, shake their heads and one half of their bodies, and swing themselves in every direction. Now is going to begin an operation which will afford the greatest delight to the admirer of nature.

" Each of those *animalculæ* works himself a small and almost imperceptible cocoon, in the shape of an egg, in which he wraps himself up. Thus they make, as it were, their winding-sheet. They seem to be born but to die.

" Those millions and millions of cocoons, all close to each other, and the formation of which has not taken two hours, form a white robe, in which the cassada-worm appears elegantly clothed. While they are thus decking him, he remains in a state of almost lethargic torpidity.

" As soon as this covering is woven, and the little workmen who have made it have retired and hid themselves in their cells, the worm endeavours to rid himself of those barbarous guests, and of the robe which contains them, but does not succeed in this attempt without the greatest efforts.

" He comes out of this kind of enclosure entirely flaccid and dull. Instead of his former fat and shining appearance, his skin now appears flabby, wrinkled and dirty, and gives him the appearance of decrepitude. He is now an exhausted, suffering being, threatened with approaching death.

" He will still gnaw a few leaves, but he no longer eats with that voracious appetite which indicated an active and vigorous constitution. Shortly afterwards he passes to the state of a chrysalis, and after giving life to thousands of eggs, he suddenly loses his own, leaving to the cultivator who has not yet

bethought himself of calculating the advantage that he may draw from him, an advantage which may be so improved as to much more than compensate the ravages which he occasions.

“Shell of the Ichneumon Fly.”—I had imagined that the thousands of little worms which this shell contains in the cocoons of which it is composed, would be hatched some day. I shut it up therefore in a box closed with great caution. Every morning, and very often in the course of the day, I examined it, in order to catch the moment when those little animals were to be born a second time.

“In fact, at the expiration of about eight days, I found the inside of the box lined with a cloud of little flies. I made myself certain that they issued out of the little cocoon. Several which issued out of them before my eyes, left me no doubt as to the fact.

“I then took up some of those flies, and putting them on a pincer, I examined them with a microscope.

“They are bold and lively: they have four wings. Their antennæ are long and vibrating, their belly hangs by a very fine thread: there are some that have a tail, and others that do not show it. Afterwards I satisfied myself that they feed upon small insects that appear to be of the family of *Acarus*. Those indications appeared to me sufficient to be satisfied that they belong to the family of the ichneumon.

“Observations on Animal Cotton.”—I have often held in my hand that cotton shell or wrapper. Its whiteness is dazzling.

As soon as the flies have quitted the cocoon, it may be used without any preparatory precaution. It is made up of the purest and finest cotton.

“I call it *cotton* because it is *idio-electric*, and is pervious to the electric fluid.

“I add to this denomination the epithet *animal*, in contradistinction to common cotton, which may henceforth be called *vegetable cotton*, so that the two species may be distinguished from each other by their names, as they are by their origin, although they are very nearly related to each other in their effects.

“It is to be observed, that what might be called *cob-web* in the covering of the fly-carrier, or small flocks of silk which are probably intended to shelter the animal from the rain, is far superior to what is called *ferrit* before, and *sleet silk* after the preparation of the finer silk. There is no refuse, no inferior quality in animal-cotton; every thing in it is as fine and beautiful as can be imagined.

“It is possible, if we may form a judgment by analogy, that medicine, which has extracted from silk what is called *English drops*, a remedy to which the greatest efficacy is attri-

buted, may derive a similar advantage, perhaps for the cure of other disorders, from an extract of the animal cotton, which might be called the *St. Domingo drops*.

“In short, there is no need here of any of the precautions which the silk-worm requires. The robe which covers the fly-carrier, is worked every where, and every where perfectly well.

“I shall only observe, that as the rain speedily destroys the cassada-worm, the instant might be seized on when the ichneumon fly has deposited her eggs, to put the fly-carrier under shelter. His natural food might be procured for him, as is done with the silk-worm.

“The ichneumon fly never fails thus to come and deposite her eggs. I have never seen a fly-carrier that was not covered with the robe or shel that I have spoken of. I have continued this observation for many years, and the crop was so abundant, that I alone could collect, in less than two hours, the quantity of one hundred pints, French measure.

“I repeat it, animal cotton is attended with none of the difficulties which occur in the preparation of vegetable cotton. It is so pure, that as soon as the ichneumons have left it, which happens eight or ten days after their reclusion, it may be carded and spun.

“If it should want any preparation, it could be only in case it should not have been sufficiently guarded against dust and rain.

“Vegetable cotton, besides the seeds that produce it, and with which it is charged, is filled with extraneous matter, of which it cannot be freed, but with a minute attention, many hands and much time, or with the help of machines which have not yet been brought to perfection.

“In every point of view, animal cotton appears to me to have a great superiority over that of the vegetable kind.

“It will, perhaps, be wondered at, that experience has not long ago ascertained this fact, but let it be considered that the silk-worm and its use, were known long before any use was made of them, and that we are now carefully repairing the losses that we have suffered by the careless indifference of our forefathers.

“The fly-carrier may experience the same fate, because it is less difficult to reason than to make experiments; but I dare hope that as soon as it shall have prevailed over the sophistry of indolence, it will stand the competition with silk and vegetable cotton. It is more abundant than either. It requires less time and less trouble to procure it.

“I have but one word more to add. Silk and vegetable cotton serve only to envenom and inflame wounds, which is attri-

buted to the asperities of their filaments. I have frequently employed animal cotton as lint in the hospital of my plantation: it has always supplied the want of that made of flaxen linen, and I have not observed the smallest inconvenience to arise from the use that I have made of it.

"Had it not been for the troubles that have laid our colony waste, and which have prevented the necessary communication, I should have brought to you a fly-carrier in every one of the periods of his life. You would have seen the eggs, the magnificent robe with which he is decked at his birth, the kind of food that he is fond of, the simple but noble vestment in which he wraps himself up on the approach of his tormentors; you would have seen those covering his whole body as it were with points; you would have seen him covered with his shell, and that same shell carded, spun, and ready for the weaver. I had, in a great degree, already executed this design."

Note concerning a Vegetable found under Ground. In a Letter from Colonel BULL.

"I take the pleasure of giving you an account of a singular blossom, which I discovered last May, in digging of a mill-race, on Opeckon Creek, through a rich bottom of low ground, covered, in general, with well-grown large timber of various kinds, particularly oak, poplar and walnut; several of which trees are from three to four feet through, standing on the ground where the race was dug. The curiosity is this, that between five and six feet under ground, chiefly a loomy, solid clay, one of the diggers discovered a blossom, not in full bloom, nearly of the colour of the lilac, which struck his attention. He called me to see it, not knowing what it could be. Upon viewing it, I recollected the form, and told the diggers it was the same kind of blue flower which had grown upon the surface of the ground adjacent, and was then faded. In order to prove it, I desired one of the men to dig up the root of the one under ground and the one upon the surface, which, upon examination, proved to be the very same kind. The body of earth where the plant was found must have been formed, perhaps, some centuries, by reason of the uncommon size of the timber which it contained, and from which the most heavy part of the mill-timber was procured."

Some Account of the Poisonous and Injurious Honey of North-America. By BENJAMIN SMITH BARTON, M.D.

As honey partakes, in a greater or less degree, of the properties of the flowers from which it is extracted, it is of considerable importance to know the sources of those good or ill

qualities which it is found to possess. This subject, Dr. B. observes, has been very little attended to in this country, and it is the purpose of this paper to suggest some useful hints to those who raise bees, and induce them to bestow more particular attention to the management of those valuable insects.

The effects produced by poisonous honey are thus described:

“ I must observe, that in these hints I do not mean to include among the disagreeable consequences of the eating of honey, the occasional effect of its purging: for although, as I shall presently observe, a purging is one of the common effects of the poisonous honey, yet the most innocent honey will often induce the same state of the body, when it is eaten in large quantities, or when it meets with an irritable state of the bowels.

“ The honey which I call deleterious or poisonous honey, produces, as far as I have learned, the following symptoms or effects : viz. in the beginning, a dimness of sight or vertigo, succeeded by a delirium, which is sometimes mild and pleasant, and sometimes ferocious; ebriety, pain in the stomach and intestines, convulsions, profuse perspiration, foaming at the mouth, vomiting, and purging; and, in a few instances, death. In some persons a vomiting is the first effect of the poison. When this is the case, it is probable that the persons suffer much less from the honey than when no vomiting is induced. Sometimes the honey has been observed to produce a temporary palsy of the limbs; an effect which I have remarked in animals that have eaten of one of those very vegetables from whose flowers the bees obtain a pernicious honey.

“ Death is very seldom the consequence of the eating of this kind of honey. The violent impression which it makes upon the stomach and intestines often induces an early vomiting or purging, which are both favourable to the speedy recovery of the sufferer. The fever which it excites is frequently relieved, in a short time, by the profuse perspiration, and, perhaps, by the foaming at the mouth. I may add, that as the human constitution resists, to an astonishing degree, the effects of the narcotic and other poisonous vegetables that are best known to us, so we need not wonder that it also resists the effects of the deleterious honey which is procured from such vegetables.”

The deleterious may be distinguished from the innocent honey by its colour. It is said to be generally of a crimson, and sometimes of a reddish brown colour; and is of a thicker consistence than the innoxious kind. But these signs Dr. B. does not consider as altogether infallible, as BRUCE, ACOSTA, and others, have remarked honey of a crimson and dark colour

which may be eaten with perfect impunity. Mr. WILLIAM BARTRAM, of Philadelphia, observes, that the noxious honey of the Carolinas and Floridas is often of the same colour with the innocent honey. Its colour is probably derived from the flowers from which it is obtained. It may be rendered harmless by boiling and straining, or by being long kept.

As the effects produced by poisonous honey are similar to those produced by many narcotic vegetables, such as opium, henbane, thorn-apple, &c. Dr. B. thinks the same mode of treatment may be observed in both cases. The Indians are said to use *cold bathing* as a remedy.*

Dr. B. thinks it would be well to observe how far the bees themselves are injured by quaffing the nectar of poisonous flowers. Some flowers, such as the crown imperial, *fritillaria imperialis*, and the *nerium oleander*, are avoided by bees. A remark of Mr. EVELYN, in his *Sylva*, is quoted by Dr. B. that bees who feed on the blossoms of the elm are liable to the *lask*, a disease described by Virgil (*Georgics*, lib. iv. l. 251—280).

In the southern parts of North-America the poisonous honey is observed most to abound.

"In South-Carolina, in Georgia, and in the two Floridas, but more especially in East-Florida, the instances of injuries from the eating of wild honey are more numerous than in any other parts of North-America that are known to us.

"There is a tract of country included between the rivers St. Illa and St. Mary's, in East-Florida, that is remarkable for abounding in vast numbers of bees. These insects, which were originally introduced into Florida by the Spaniards, have increased into innumerable swarms, from the facility with which they procure their food, in perhaps the richest flowered country of North-America. In this tract of country, the alarming effects of the wild honey are often experienced by the settlers, by wandering hunters, and by savages."

The vegetables from whose flowers poisonous honey is extracted, as mentioned by Dr. B. are the dwarf laurel, *kalmia angustifolia*, sometimes called ivy, lambkill, &c. *kalmia latifolia*, laurel, or great laurel, named also winter-green, spoonwort, &c. *kalmia hisurta*; and *andromeda mariana*, or broad-

* On the effects of this poison, PLINY remarks (lib. xxi. § 44). *Qui edere abjiciunt se humi, refrigerationem querentes; nam et sudore diffluunt*. He recommends the use of the juice of mallows or ivy leaves as an embrocation, or to be drank by the person affected. *Ergo malva succo aut foliorum edera perungi salutare est vel percussos ea bibere.* (§ 45).

leaved moor-wort. He conjectures, also, that some of the fungous tribe of vegetables, growing in the Southern States, and which are poisonous, may afford poison to bees, probably from the dew which settles on them. Other poisonous flowers, from which bees are known to obtain honey, are *rhododendron maximum*, or Pennsylvania mountain laurel; *azalea nudiflora*, or the wild honeysuckle; *datura stramonium*, called Jamestown weed, gymsin, thorn-apple, stink-weed, French chestnut.

The effects produced by poisonous honey, extracted from the mountain laurel, are so well described by Xenophon, in his *Anabasis* (lib. iv.), that we shall translate the passage for the curious reader.

"After the Greeks had gained the ascent, they encamped in a number of villages, where they found an abundance of all kinds of provisions. As there were a great many bee-hives, all the soldiers who eat the honey were seized with vomiting and purging, attended with a delirium, so that they could not stand. Those who eat little of the honey appeared as if they were intoxicated; while those who eat much of it resembled mad-men, and some seemed dying. In this state they lay dispersed over the ground like men after an engagement: none of them, however, died; and the next day they recovered their senses. On the third and fourth day they got upon their feet, feeling as if they had been taking medicine."*

Dr. B. erroneously refers to the *Memorabilia* of Xenophon for the above relation; but as he had only Tournefort before him, he was probably led into the mistake through inadvertence. Tournefort, in his travels, confirms the accounts given by Xenophon, Dioscorides and Pliny, of the effects produced by poisonous honey. He describes two plants, which the people of the country (bordering on the Euxine or Black-Sea) told him bore flowers from which the honey was gathered that produced the effects described by Xenophon. One has leaves like the medlar, and bears yellow flowers; the other, the mountain laurel, bears purple flowers.

The following facts concerning the effects of the *dwarf laurel* are related by Dr. B.

* The species of laurel growing in the country of the Euxine, through which the Greeks passed, is described by PLINY, lib. xxi. § 45.—"Aliud genus in eodem Ponti situ, gente Sannorum mellis, quod ab insania, quam gignit, manomenon vocant. Id existimatur contrahi flore rhododendri, quo scatent sylvæ. Gensque ea cum ceram in tributa Romanis præstet, mel (quoniam existiale est) non vendit."

“About twenty years since, a party of young men, solicited by the prospect of gain, moved, with a few hives of bees, from Pennsylvania into the Jerseys [New-Jersey.] They were induced to believe that the savannas of this latter country were very favourable to the increase of their bees, and, consequently, to the making of honey. They accordingly placed their hives in the midst of these savannas, which were finely painted with the flowers of the *kalmia angustifolia*. The bees increased prodigiously, and it was evident that the principal part of the honey which they made was obtained from the flowers of the plant which I have just mentioned. I cannot learn that there was any thing uncommon in the appearance of the honey; but all the adventurers who eat of it became intoxicated to a great degree. From this experiment they were sensible that it would not be prudent to sell their honey; but, unwilling to lose all their labour, they made the honey into the drink well known by the name of metheglin, supposing that the intoxicating quality which had resided in the honey would be lost in the metheglin. In this respect, however, they were mistaken. The drink also intoxicated them; after which they removed their hives.”

The ingenious author of this interesting paper concludes it with the following observations.

“The raising of bees, for the purposes of procuring their honey and their wax, may, at some future period, become an object of great importance to the United States. Surely, then, it would be a matter of consequence to attend to the cultivation or preservation of those vegetables which furnish an innocent and a well-flavoured honey, and a good wax. But even in a more limited view of the subject, some knowledge of these vegetables seems to be indispensably necessary. And in the new settlement, whither the settler has carried his bees, where improvements are still very imperfect, it cannot be deemed a trivial task to have pointed out some of those vegetables from which an injurious honey is obtained.

“The ancients, who, in some respects at least, were equal to the moderns, appear to have paid much attention to this subject. Virgil and Columella have both told us what plants ought to grow about apiaries. It is unnecessary to repeat, in this place, what the two Roman writers have said on the subject. The *Georgics* of the Mantuan poet are in the hands of every man of taste; and the work of Columella *should* be read wherever agriculture engages the attention of gentlemen.

“The proper management of bees may be considered as a science. It is not sufficient that bees merely make honey

and wax. Their honey may be injurious or poisonous, and their wax may be nearly useless. To assist and to direct the labours of these little insects, the knowledge and the hand of man are required. Let, then, this interested being be at least attentive to his own benefits and pleasures. Let him carefully remove from about the habitations of his bees every fœtid or poisonous vegetable, however comely its colour or its form. In particular, let him be careful to remove those vegetables which are noxious to himself. In place of these, let him spread the 'marjoram and thyme,' and other plants, 'the love of bees,' and his labours will be rewarded. He may then furnish his table with an honey not inferior to that of Mount Hermettus or of Athens; nor to that of Sicily, to which Virgil has so handsomely alluded in the seventh eclogue:"

'Nerine Galatea, thymo mihi dulcior Hyblæ,
'Candidior cyncis, hederâ formosior albâ.'

L. 37, 38.

There are two papers which may be denominated *economical*.

Description of a Stopper for the Openings by which the Sewers of Cities receive the Water of their Drains. By Mr. JOHN FRASER, of Chelsea, London.

"The parts of this stopper resemble so much the hopper and shoe of a grist-mill, that they may be called by those names. The opening by which the water from the drains passes down into the common sewer, is generally secured at its orifice by a curb or frame of wood, and by an iron grating which prevents large bodies from falling in. Let the iron grating open on a hinge, then set into the curb a hopper of wood, sheet or cast-iron, so closely fitted at its top to the curb as to prevent the passage of air between them. Under this hopper suspend a shoe or box, close except at top, within which the lower opening of the hopper may empty itself, and the water flow off over the brim of the shoe into the sewer. When the water ceases to flow, the shoe remaining full, keeps the lower opening of the hopper closed, so that no air can pass up through it. The iron grating is shut down on the hopper to keep bodies from falling into it."

Description of some Improvements in the common Fire-Place, accompanied with Models, offered to the Consideration of the Philosophical Society. By C. W. PEALE, and his Son RAPHAËLE.

This improvement consists in a *sliding mantle*, and valve, or damper, made of sheet-iron or copper, which moves up

and down in grooves on each side of the fire-place, by means of weights and pullies, which move freely behind the pilasters or frame composing the frontispiece of the chimney.

"The conveniences of this fire-place are, that the fire may be kindled quickly, and, after it burns freely, the valve or damper being lowered, leaving only an opening sufficient to carry off the smoke, which, in a well-constructed chimney, may generally be closed to an inch and an half, or two inches, but little heat will escape in the throat of the fire-place.

"If the chimney is subject to smoke, it is an easy expedient to lower the sliding-mantle so as to increase the draught.

"But the safety from the dangers of fire with this fire-place is not of the least importance, for whatever fire is left in the place at night, with the valve close shut, and the sliding-mantle lowered to join the hearth, the fire will be smothered. In like manner, if, by accident, the soot takes fire in the flue of the chimney, no alarm follows, as it may instantly be extinguished.

"The last improvement which has been made, is to remedy the evil of the smoke passing between the sliding-mantle and breast-work, and escaping through the crevices round the mantle-piece.

"A hole is made in the brick work in the middle, a little above the opening of the fire-place, forming a small flue to let in the external air, by which the smoke is driven back into the chimney. This has been found to have an admirable effect even in some chimnies which before had smoked so as to be deemed incurable."

On the *antiquities* of America there is the following article:
Remarks on certain Articles found in an Indian Tumulus at Cincinnati, and now deposited in the Museum of the American Philosophical Society. By GEORGE TURNER.

The *Appendix* contains two papers transmitted by candidates for the premium offered by the Society "for the best method of preventing the premature decay of peach-trees." The premium, sixty dollars, was divided between the authors of the two communications.—As they contain observations which may be useful, we shall present them to our readers.

Account of a Method of preventing the Decay of Peach-Trees. By JOHN ELLIS, of New-Jersey.

"The decay of peach-trees is owing to a worm, which originates from a large fly, that resembles the common wasp: this fly perforates the bark, and deposits an egg in the moist or sappy part of it. The most common place of perforation is at the surface of the earth, and as soon as the worm is able to move, it

descends into the earth, probably from an instinctive effort to avoid the winter's frost. This may be ascertained by observation; the tract of the worm from the seat of the egg being visible at its beginning, and gradually increasing, in correspondence with the increasing size of the worm: its course is always downwards. The progress of the young worm is extremely slow, and if the egg is deposited at any considerable distance above the surface of the earth, it is long before the worm reaches the ground. The worms are unable to bear the cold of winter unless covered by the earth, and all that are above ground after frost are killed.

"By this history of the origin, progress and nature of the insect, we can explain the effects of my method, which is as follows: In the spring, when the blossoms are out, clear away the dirt, so as to expose the root of the tree, to the depth of three inches; surround the tree with straw about three feet long, applied lengthwise, so that it may have a covering one inch thick, which extends to the bottom of the hole, the but ends of the straw resting upon the ground at the bottom. Bind this straw round the tree with three bands, one near the top, one at the middle, and the third at the surface of the earth; then fill up the hole at the root with earth, and press it closely round the straw. When the white frosts appear, the straw should be removed and the tree should remain uncovered until the blossoms put out in the spring.

"By this process the fly is prevented from depositing its egg within three feet of the root, and although it may place the egg above that distance, the worm travels so slow that it cannot reach the ground before frost, and therefore is killed before it is able to injure the tree.

"The truth of the principle is proved by the following fact—I practised this method with a large number of peach-trees, and they flourished remarkably, without any appearance of injury from the worm, for several years: I was then induced to discontinue the straw with about twenty of them. *All those which are without the straw have declined, while the others which have had the straw continue as vigorous as ever.*"

Description of a Method of cultivating Peach-Trees, with a View to prevent their premature Decay; confirmed by the Experience of forty-five Years, in Delaware State and the Western Parts of Pennsylvania. By THOMAS COULTER, Esq. of Bedford County, Pennsylvania.

"The death of young peach-trees is principally owing to planting, transplanting, and pruning *the same stock*, which occasions it to be open and tender, with a rough bark; in consequence of which insects lodge and breed in it, and birds search

after them, whereby wounds are made; the gum exudes, and in a few years the tree is useless. To prevent this, transplant your trees as young as possible; if in the kernel it will be best, as there will then be no check of growth. Plant them sixteen feet apart. Plow and harrow between them, for two years, without regard to wounding them, but avoid tearing them up by the roots. In the month of March or April, in the third year after transplanting, cut them all off by the ground, plow and harrow among them as before, but with great care to avoid wounding or tearing them. Suffer all the sprouts or scions to grow, even if they should amount to half a dozen or more: they become bearing trees almost instantaneously on account of the strength of the root. Allow no animals but hogs to enter your orchard, for fear of their wounding the shoots, as a substance drains away through the least wound, which is essential to the health of the tree and the good quality of the fruit.

“ If the old stock is cut away the third year after transplanting, no more shoots will come to maturity than the old stump can support and nourish: the remainder will die before they bear fruit, and may be cut away, taking care not to wound any other stock. The sprouts, when loaded with fruit, will bend and rest on the ground in every direction for many years, all of them being rooted as if they had been planted, their stocks remaining tough and their bark smooth for twenty years and upwards. If any of the sprouts from the old stump should happen to split off and die, cut them away; they will be supplied from the ground by others, so that you may have trees from the same for 100 years, as I believe. I have now trees from one to thirty-six years old, all from the same stump. Young trees, formed in this manner, will bear fruit the second year, but this fruit will not ripen so early as the fruit on the older trees from the same stump. Three years after the trees are cut off, the shoots will be sufficiently large and bushy to shade the ground so as to prevent the growth of grass that might injure the trees, therefore plowing will be useless, and may be injurious by wounding them. It is also unnecessary to manure peach-trees, as the fruit of manured trees is always smaller, and inferior to that of trees which are not manured. By manuring you make the peach-trees larger and apparently more flourishing, but their fruit will be of a bad kind, looking as green as the leaves, even when ripe, and later than that of trees which have not been manured. Peach-trees never require a rich soil; the poorer the soil the better the fruit: a middling soil produces the most bountiful crop. The highest ground is the best for peach-trees, and the north side of hills is most desirable, as it retards vegetation and prevents the destructive effects of late frosts, which occur in the month of April in Pennsylvania. Convinced by long experi-

ence of the truth of these observations, the author wishes they may be published for public benefit, and has been informed that Colonel Luther Martin, and another gentleman, in the lower part of Maryland, have adopted a similar plan with great advantage."

ART. II. *The Medical Repository, and Review of American Publications on Medicine, Surgery, and the Auxiliary Branches of Philosophy. Conducted by Samuel L. Mitchill, M. D. F. R. S. E. one of the Physicians of the General Hospital, Representative in Congress for the City of New-York, Secretary to the Agricultural Society, &c. and Edward Miller, M. D. Vol. v. 8vo. pp. 492. New-York. T. & J. Swords. 1802.*

AT the commencement of this valuable publication, we heard the prediction frequently repeated, that, like most other periodical works which had been attempted in America, it might drag on through one or two volumes, but would soon be abandoned for want of encouragement. And, in truth, the support hitherto given by our countrymen to publications of a similar nature, has been, in most instances, so slender, precarious, and short-lived, that there was, in the beginning, too much reason to apprehend a fulfilment of the prophecy. Happily, however, it has not been accomplished. Whether it is because the work before us has been conducted on a better plan than preceding attempts, or whether the *medical* part of the community may be considered as possessing more literary zeal and enterprize than those of other professions, we shall not undertake to say. But the fact is, that the *Medical Repository* has received more ample encouragement than any work of the like kind ever received in our country; and the editors have completed the *fifth* volume with the increasing patronage of the public.

This volume is equal to any of those which have gone before it, in the variety and richness of its materials. We shall proceed, according to the plan hitherto adopted, to lay some account of its contents before our readers.

It contains the following papers on *Pestilential Diseases*:

1. *A Collection of Phenomena relative to the Connection between Earthquakes, Tempests, and Epidemic Diseases; and a Vindication of the Doctrine of Equivocal Generation: By Noah Webster, jun. Esq. in a Letter to Dr. Mitchill.*

2. *Remarks on the Work entitled, "A Brief History of Epidemic and Pestilential Diseases:" In a Letter from Dr. Priestley to Dr. Rush.*
3. *Some Observations on the Black-Vomit: Communicated by Dr. P. S. Physick, of Philadelphia, to Dr. Miller.*
4. *On the Topography and Diseases of Greeneville, on Tar-River (North-Carolina): Communicated by Dr. G. Pillson, of that Place, to the Editors.*
5. *An Account of Febrile Diseases, as they have appeared in several Towns in the County of Cumberland, District of Maine, from January, 1800, to January, 1801: Communicated by Dr. Jeremiah Barker, of Portland, to Dr. Mitchill.*
6. *An Account of a Bilious Yellow Fever, which prevailed on board the United States Ship Delaware, in the Island of Curacao, from the beginning of November, 1799, until the latter end of February, 1800: Communicated by Samuel Anderson, Surgeon's Mate.*

Without entering into a minute examination of each of the above communications, we shall only remark, that they are all instructive and valuable; and that several of them, particularly those of Dr. Pillson, Dr. Barker, and Dr. Anderson, present facts and reasonings strongly in favour of the doctrine that malignant and pestilential diseases are products of *home generation*.

The next class of papers in this volume consists of those which relate to miscellaneous medical subjects. They are the following:

1. *Case of Hydrophobia: Communicated by Dr. Philip Syng Physick, of Philadelphia, to Dr. Miller.*
2. *An Account of the salutary Effects of a Salivation, and also of Tonic Remedies, in Pulmonary Consumption; in three Letters to Dr. Edward Miller: By Benjamin Rush, M. D. Professor of the Institutes of Medicine, and of Clinical Practice, in the University of Pennsylvania.*
3. *Trials with Nitric Acid in Venereal Disorders, in which its Value therein is attempted to be ascertained: In a Letter from J. R. B. Rodgers, M. D. and Professor of Midwifery and of Clinical Medicine in Columbia College, to Dr. Mitchill.*
4. *Case of Pulmonary Consumption cured by the Use of the Digitalis Purpurea: in a Letter from John Spence, M. D. of Dumfries (Virginia), to Dr. Mitchill.*

5. *Practical Remarks on the Use of Digitalis in Consumption: By Dr. Spence, in a Letter to * * * **
6. *An Account of a Child nearly poisoned by the Seeds of the Thorn-Apple: Communicated in a Letter from Dr. Samuel Brown, of Lexington, Kentucky, to Dr. Mitchill.*
7. *Efficacy of Fern in causing the Discharge of the Tape-Worm: Communicated by Dr. Gardiner Jones, of the City of New-York.*
8. *Case of supposed Extra-Uterine Fætus: Communicated in a Letter from Dr. S. Barnum, of New-York, to Dr. Miller.*
9. *Case of Poison by Arsenic: Communicated by Dr. S. Barnum to Dr. Miller.*
10. *Remarkable Case of the successful Application of Electricity: In a Letter from John Vinall, Esq. to Dr. S. Brown, of Boston: Communicated to Dr. Mitchill.*
11. *Case of imperforated Anus: Communicated by Dr. John P. Campbell, to Dr. Samuel Brown, of Kentucky,*
12. *An Exhibition of several wrong Associations of Ideas, whereby Medical and Chemical Knowledge have been remarkably perverted and retarded: In a Letter from Dr. Mitchill to Dr. Rush.*
13. *An Account of the salutary Effects of Blood-Letting in curing the Disease brought on by taking excessive Quantities of Opium: In a Letter to Dr. Mitchill, from Dr. Rush.*
14. *The good Effects of Sneezing in Hydrocephalus: Communicated in a Letter from Dr. Malachi Foot, of New-York, to Dr. Mitchill.*
15. *A singular Case of Hydrocele: Communicated in a Letter from Dr. Edward D. Smith, of Charleston (South-Carolina), to Dr. Miller.*
16. *A case of Epilepsy, in which Argentum Nitratum was successfully exhibited: Communicated to the Editors by L. J. Jardine, M. D. of Philadelphia.*
17. *A Case of Hydrophobia: Communicated by John R. Coxe, M. D. of Philadelphia, to Dr. Miller.*
18. *An Account of Bilious Colics, as they appeared in several Towns in the County of Cumberland, District of Maine, in the Months of May, June and July, 1801, and of the surprising Relief obtained therein by Alkaline Remedies: By Dr. Jeremiah Barker, of Portland*

19. *Case of Laimbar Abscess: Communicated in a Letter from Edward Cutbush, Surgeon of the Frigate United States, to Dr. Mitchill.*
20. *Some Experiments and Observations on the Mode of Operation of Mercury on the Human Body; read before the Academy of Medicine of Philadelphia. By Dr. Philip S. Physick.*
21. *Observations on the Disease produced by the Bite of a Mad Dog: Communicated by James Mease, M. D. to Dr. Miller.*
22. *Remarks on the Importance of the Stomach as a Centre of Association, a Seat of Morbid Derangement, and a Medium of the Operation of Remedies in Malignant Diseases: By Edward Miller, M. D.*
23. *Narrative of Facts concerning the Inoculation of the Kine-Pock: Communicated by Benjamin Waterhouse, M. D. &c. &c. to the Editors.*
24. *Observations on the Inoculation of the Kine-Pock: Communicated by John Spence, M. D. of Virginia, to Dr. Waterhouse.*
25. *Answer of Dr. Waterhouse to the preceding Letter.*
26. *An Account of a Case of Pulmonary Consumption successfully treated by a Salivation: In a Letter from George Pfeiffer, M. D. to Dr. Benjamin Rush.*
27. *Remarkable Case of Madness: Communicated by Dr. John Vaughan, of Wilmington (Delaware), to Dr. Mitchill.*
28. *Facts concerning the Efficacy of Alkalies in Diseases of the Alimentary Canal: Communicated in a Letter from Mr. Joseph Bringhurst, jun. of Wilmington (Delaware), to Dr. Miller.*
29. *Practical Remarks on the Internal Use of Carbonate of Pot-Ash: By Dr. Daniel, of Falmouth (Virginia), in a Letter to Dr. Mitchill.*

To analyse the contents, and pronounce on the character of each of the above papers, would lead us far beyond our limits. They are all worthy of publication, and some of them eminently so.

The *chemical* communications in this volume are the three following.

1. *Observations and Experiments relating to the Pile of Volta: In a Letter from Dr. Priestley to Dr. Woodhouse.*

2. *Miscellaneous Observations relating to the Doctrine of Air: In a Communication from Dr. Priestley to Dr. Mitchill.*
3. *A Reply to Mr. Cruikshank's Observations in Defence of the New System of Chemistry, in the fifth Volume of Nicholson's Journal: In a Letter from Dr. Priestley to Dr. Woodhouse.*

In these papers Dr. Priestley still manifests his firm adherence to the *phlogistic* theory; indeed, he discovers increasing confidence that it will speedily triumph over the fashionable system.

The papers on *Natural History* relate to the following subjects.

1. *Remarks on a Letter of the Rev. Zechariah Lewis, relating to a Subterranean Wall discovered in North-Carolina: By James Woodhouse.*
2. *Mr. Lewis's Reply to Dr. Woodhouse's Remarks.*
3. *Some Thoughts concerning Dreams: By Dr. Priestley.*
4. *An Account of a new, pleasant, and strong Bitter, and yellow Dye, prepared from the Stem and Root of the Xanthorhiza Tinctoria, or Shrub Yellow Root, with a Chemical Analysis of this Vegetable: By James Woodhouse, M. D. &c.*
5. *Remarks on Dr. Priestley's Observations on the Sense of Hearing: Addressed to the Editors by an Anonymous Correspondent.*

The lovers of natural history will find considerable instruction and amusement in the perusal of these communications.

The following is a list of the publications reviewed in this volume.

1. *Some Account of the poisonous and injurious Honey of North-America: By Benjamin Smith Barton, M. D. Philadelphia.*
2. *Observations on the Arguments of Professor Rush, in favour of the inflammatory Nature of the Disease produced by the Bite of a Mad Dog: By James Mease, M. D. Philadelphia.*
3. *Introduction to a Course of Lectures on Natural History, delivered in the University of Pennsylvania, November 16, 1799: By Charles W. Peale. Philadelphia.*
4. *Discourse introductory to a Course of Lectures on the Science of Nature, &c. delivered in the Hall of the University of Pennsylvania, November 8, 1800: By Charles W. Peale. Philadelphia.*
5. *A Treatise on the Human Teeth, concisely explaining their Structure, and Cause of Disease and Decay: to*

which is added, the most beneficial and effectual Method of treating all Disorders incidental to the Teeth and Gums; with Directions for their judicious Extraction, and proper Mode of Preservation: interspersed with Observations interesting to, and worthy the Attention of every Individual: By R. C. Skinner, Surgeon-Dentist. New-York.

6. *Medical and Physical Memoirs*, containing, among other Subjects, a particular Inquiry into the Origin and Nature of the late Pestilential Epidemics of the United States: By Charles Caldwell, M.D. Philadelphia.
7. *Transactions of the American Philosophical Society*, held at Philadelphia, for promoting Useful Knowledge. Vol. iv. Philadelphia.
8. *Considerations on the Substance of the Sun*: By Augustus B. Woodward. Washington.
9. *A Letter to Dr. Percival (of Manchester, in England), on the Prevention of Infectious Fevers: and an Address to the College of Physicians at Philadelphia, on the Prevention of the American Pestilence*: By John Haygarth, M.D. F.R.S. &c. London.
10. *The great Error of American Agriculture exposed; and Hints for Improvement suggested*: By Thomas Moore. Baltimore.
11. *A Brief History of the Mississippi Territory; to which is prefixed, a Summary View of the Country between the Settlements on Cumberland River and the Territory*: By James Hall, A.M. Salisbury (N.C.)
12. *Six Introductory Lectures to Courses of Lectures upon the Institutes and Practice of Medicine, delivered in the University of Pennsylvania*: By Benjamin Rush, M.D. Professor of Medicine in the said University. Philadelphia.
13. *A Reply to Dr. Haygarth's "Letter to Dr. Percival on Infectious Fevers," and his "Address to the College of Physicians at Philadelphia, on the Prevention of the American Pestilence;" exposing the Medical, Philosophical, and Literary Errors of that Author, and vindicating the Right which the Faculty of the United States have to think and decide for themselves respecting the Diseases of their own Country, uninfluenced by the Notions of the Physicians of Europe*: By Charles Caldwell, M.D. Fellow of the College of Physicians of Philadelphia, &c. &c. &c. Philadelphia.

14. *Explanation of the Synopsis of Chemical Nomenclature and Arrangement: containing several important Alterations of the Plan originally reported by the French Academicians: By Samuel L. Mitchill, M.D. F.R.S.E. Professor of Chemistry in Columbia College, &c. &c. New-York.*
15. *Physical Investigations, and Deductions from Medical and Surgical Facts, relative to the Causes, Nature and Remedies of the Diseases of a warm and vitiated Atmosphere, from Climate, Local Situation, or Season of the Year: together with an Historical Introduction to Physianthropy, or the Experimental Philosophy of Human Life; that of Diseases, and also of Remedies: By William Barnwell, M.D. formerly Surgeon in the Employ of the Hon. East-India Company of London. Philadelphia.*
16. *The Medical Assistant, or Jamaica Practice of Physic: designed chiefly for the Use of Families and Plantations: By Thomas Dancer, M.D. late Physician to the Bath, and Island Botanist. Kingston (Jamaica).*
17. *Collections for an Essay towards a Materia Medica of the United States: By Benjamin Smith Barton, M.D. &c. Part 1st. Philadelphia.*
18. *Notes and Observations on the Pine-Lands of Georgia; showing the Advantages they possess, particularly in the Culture of Cotton, &c. to which is added, a Geographical Sketch of the State of Georgia, with a Comparative View of the Population of 1791 and 1801, and the Exports of the Years 1791 and 1800: By George Sibbald, of Augusta. Augusta.*
19. *Result of Astronomical Observations made in the Interior Parts of North-America. London.*
20. *An Oration on the Causes of the Difference, in Point of Frequency and Force, between the Endemic Diseases of the United States of America, and those of the Countries of Europe; delivered, by Appointment, to the Philadelphia Medical Society, on the fifth Day of February, 1802: By Charles Caldwell, M.D. Philadelphia.*
21. *Annual Oration, delivered before the Chemical Society of Philadelphia, January 31, 1801: By Felix Pascalis, M.D. Vice-President of the Society. Philadelphia.*
22. *The Female Monitor, consisting of a Series of Letters to married Women on Nursing and the Management of Children: By the late Hugh Smith, M.D. With oc-*

casional Notes, and a Compendium of the Diseases of Infants: By Dr. John Vaughan. Wilmington (Delaware).

23. *Essays Mathematical and Physical; containing new Theories and Illustrations of some very important and difficult Subjects of the Sciences: never before published. With a Series of nine new Tables for calculating the Latitude and Longitude at Sea, by means of double Altitudes and Lunar Distances. New-Haven.*

24. *A Treatise on Dentistry, explaining the Diseases of the Teeth and Gums, with the most effectual Means of Prevention and Remedy; to which is added, Dentition, with Rules to be observed during that interesting Period: By B. T. Longbothom, Surgeon-Dentist. Baltimore.*

That portion of the volume which is devoted to *Medical and Philosophical News*, is, as usual, ample and interesting. And the papers preserved in several of the numbers, by way of *Appendix*, are, in general, worthy of the attention which the editors have paid to them.

ART. III. *A Treatise on Obligations, considered in a Moral and Legal View. Translated from the French of Pothier. In two Volumes 8vo. pp. 680. Newbern (N. C.) Martin & Ogden. 1802.*

THE high praise bestowed on the treatises of M. Pothier, by that learned and accomplished lawyer, Sir WILLIAM JONES, one of the brightest ornaments of the age, has justly excited the desire of every lover of jurisprudence to be acquainted with the works of an author so strongly recommended to his attention. Though more than thirty years have elapsed since the publication of these treatises, we have never before seen any of them in an English dress. Elementary writers on law, in Great-Britain, have, indeed, of late years, made free use of M. Pothier, who is every day becoming more familiar to the English lawyer.—The present is, we believe, the first attempt at a translation of his works, and we understand that it may be ascribed to Mr. MARTIN, of Newbern, North-Carolina, who certainly deserves credit for the industry and zeal which have led him to the execution of a task in which he could not expect any very flattering encouragement from the public.

The *Treatise on Obligations*, one of the earliest productions

of the author, was first published in 1761, and has passed through numerous editions. As nothing can better justify the introduction of his treatises into our language than the commendation of them by Sir William Jones, we shall extract it from his *Essay on the Law of Bailments*.

“At the time when this author (M. Le Brun) wrote, the learned M. Pothier was composing some of his admirable treatises on all the different species of express or implied contracts; and here I seize, with pleasure, an opportunity of recommending those treatises to the English lawyer, exhorting him to read them again and again; for, if his great master Littleton has given him, as it must be presumed, a taste for luminous method, apposite examples, and a clear manly style, in which nothing is redundant, nothing deficient, he will surely be delighted with works in which all those advantages are combined, and the greatest portion of which is law at *Westminster* as well as at *Orleans*. For my own part, I am so charmed with them, that, if my undissembled fondness for the study of jurisprudence were never to produce any greater benefit to the public than barely the introduction of Pothier to the acquaintance of my countrymen, I should think that I had in some measure discharged the debt which every man, according to Lord Coke, owes to his profession.”

As this translation is unaccompanied with any preface or introductory notice of the author, to satisfy the curiosity of the reader, we shall supply this information by some biographical sketches taken from a volume of his works now before us.

Robert Joseph Pothier was born at *Orleans*, the 9th of January, 1699. His father and grandfather had both been counsellors of the *presidial court* in that city. His education commenced at the Jesuits' College at *Orleans*, where he was distinguished for his genius, and a facility of acquisition in every branch of learning. After completing the course of the Latin language and philosophy, he applied himself to geometry and the belles-lettres. But as the natural bent of his mind led him to jurisprudence, he began the study of it in the University of *Orleans*; and as soon as he had read the Institutes of Justinian, he adopted the law as his profession, and devoted himself entirely to that science. His neglect of all other pursuits, and his exclusive devotedness to jurisprudence, for which he felt himself destined from his birth, did not arise from any want of taste, or a regard to other objects. His conversation showed that he had read the Latin poets to advantage, and he often amused himself by repeating passages from them, particularly from *Juvenal*, his favourite poet.

Having finished his study of the law at the University, he was, at the age of 21 years, made a counsellor of the *presidial court*, and was soon distinguished, at a season when others are hardly known. His attachment to jurisprudence was strong and decided, and he neglected no occasion or means of improving himself in a favourite science. That he might sooner learn how to decide points of law, he used to spend whole days with a celebrated advocate in full practice, to listen to his mode of solving the different questions on which he was consulted. His passion for his profession increased every day, and he soon became a celebrated judge. A peculiar taste led him, at first, to the Roman law, which he so thoroughly understood, that he was regarded, in this respect, as the most learned lawyer in the kingdom.—To improve himself still more in a knowledge of the civil law, he undertook, when young, to arrange in their natural order all the laws of the Digest.

The *Digest*, though a very valuable collection of laws, contains many faults. It is destitute of method, and the text of many of the authors cited is inaccurately reported, and many of the decisions introduced are contradictory, and irreconcilable with each other. The work of Mr. P. published in 1768, under the title of *Pandectæ Justinianæ in novum ordine Digestæ*, in three volumes folio, remedied these defects. It was the result of the labour of twenty years. It made him known to all the lawyers of Europe; and in particular to the Chancellor *Daguesseau*, who expressed, on various occasions, his high esteem for the learned author.

The chair of the Professor of *French Law* became vacant in 1749, by the death of M. *Prévot de la Janes*, and M. Pothier, without any request on his part, was chosen by the Chancellor to fill the place. From that time he particularly applied to this branch of law.

He had, several years before, established a *law conference*, a meeting held every week, at which he assisted young counsellors and advocates, and instructed them in the laws. Having become Professor, he endeavoured to animate the students, by instituting annual *prizes* for such of them as most distinguished themselves in the different branches of French and Roman laws. By these means he excited among them a spirit of emulation, which produced many excellent members of the bar.

Though scrupulously exact in the fulfilment of his duties as a Professor, M. Pothier was not less attentive to his duties as

a judge. During all the time that he filled the office of a judge, which was nearly 52 years, he never failed in his punctual attendance at court, except when prevented by sickness, or necessary and indispensable absence.—His fervid attachment to the study of law was almost incredible. From the hour of rising to that of rest, that is, from four or five in the morning to nine in the evening, he was engaged in his favourite pursuit, without suffering his attention to be diverted by pleasures or amusements of any kind; not even by walks or visits, which he very seldom made. He reserved only the afternoon of Thursday in each week, which he called his *play-day*, for visiting and exercise. It is to this unceasing application that the world is indebted for the numerous publications which have issued from his pen.

Though of a very delicate constitution, he enjoyed, notwithstanding his excessive application to study, a tolerable state of health, owing, no doubt, to the sobriety of his manner, and to the uniform regularity of his life.

He died March, 1772, at the age of seventy-three years.

M. Pothier was the oracle of his province; and so universal was the confidence reposed in him, that his house was resorted to like a public tribunal, where he daily dispatched many causes, and prevented, by his advice, numberless law-suits. But his reputation was not confined to his own province; magistrates of the first respectability, in every part of the kingdom, consulted him, and were proud to obtain his advice.

The character of M. Pothier was remarkably amiable. The suavity of his manners, and the calmness of his soul, were depicted in his countenance. He possessed singular modesty, great politeness, and a large portion of “the milk of human kindness,” which sometimes prevented him from showing that degree of firmness so necessary in criminal prosecutions. In him was admired that true elevation and simplicity of character which we love to see in great men, and which are most often found in those who are truly learned. His affable, obliging, and communicative disposition, rendered him universally beloved. To the strictest probity, and uncommon disinterestedness, were united beneficence and charity to the poor, who shared a large part of his patrimony. Attached to a regular and faithful discharge of all the duties of civil life, especially to those of religion, which he zealously fulfilled, he passed a life, simple, tranquil and uniform, without ambition, and without reproach.

Exclusively devoted to law and his profession, he never

married; nor did he concern himself about the affairs of his household, but left them to the management of his servants. —In his exterior there was a species of negligence, that extended to his study, in which the books and papers were in so much disorder, that he often had great difficulty to find what he wanted. He never had any relish or desire for any public employment in the administration; being, indeed, little disposed by nature or education for any other business than that of the law. He is an illustrious and striking example of how much may be performed by the unremitted and regular application of the time and talents of an individual: for it is astonishing that M. Pothier, occupied as he was in the exercise of his functions as a judge and professor, continually interrupted by people who came to consult him, should yet find time to produce so many works as he has written. The answers alone to the different questions proposed to him in writing from every quarter, would have been sufficient to have wholly engaged the attention of any other man. His epistolary correspondence was very extensive; for whoever wrote to him was sure of receiving an answer. But he possessed an astonishing memory, and great quickness at business; besides, his love of jurisprudence was so predominant, that you could not give him greater pleasure than to ask him questions in that science. Always ready to answer, he listened with patience; and though he often expressed himself with difficulty, he had the art of rendering himself easily understood, and of adapting his language to every capacity.

The works of this great lawyer, many of which were published after his death, are comprised in six volumes 4to. and twenty-eight volumes duodecimo.

Having said so much of the author, we must return to the translator.—This translation is close and faithful to the original; but so literal, perhaps, as not to please those who consider style as a matter of any importance. Many terms and phrases which are idiomatic and technical in the French, should have been translated into correspondent terms in our law, or, by an easy circumlocution, rendered more intelligible to common readers.—Without the aid of explanatory notes, numerous expressions must be wholly incomprehensible to an American lawyer. Indeed, if notes are ever necessary, they are particularly so in translating a work of this kind.

To render the translation of the treatises of *Pothier* truly and permanently valuable to lawyers in our own country, the

original should be regarded as a text, and notes and references be made to the books of English law, so that the principles of the French jurist may be compared with and applied to our own law.—The labour of such a work would, no doubt, be much greater than that of a mere naked version; but it would have, in some degree, the merit of an original, and its utility would be far more extensive.

Extracts from a work like the present cannot be made to advantage. Those whose disposition leads them to the perusal of treatises of this kind, and who have no access to the original volumes, will be gratified by this translation.

ART. IV. *A Dissertation on the Freedom of Navigation and Maritime Commerce, &c. By William Barton, M.A. &c.*

[Continued from p. 193, and concluded.]

HAVING, in the preceding section, examined the principle that "free ships make free goods," as it appears to have been understood previous to the year 1780, Mr. Barton proceeds, in the second place, to show that the principles of the armed neutrality have since been recognized as part of the law of nations.

He quotes, at considerable length, the declarations and reasonings of the several States who formed that celebrated confederacy, the principles of which were acceded to by Russia, Sweden, Denmark, Prussia, France, Spain, Holland, and the United States; while Great-Britain and Portugal were the only maritime states by whom they were resisted. As the whole of the negotiations and discussions which relate to this subject may be found in the public papers and political documents of that period, we shall not extract any part of this historical detail.

On the effect of treaties, in relation to the law of nations, Mr. B. makes these observations:

"If treaties are valid," says Vattel—that is, if the stipulations contained in them are founded on the principles of justice, equity, and moderation, and be not repugnant to the essential and indefeasible rights of mankind,—"they have, in their own nature, a perpetual and irrevocable effect." Great and important principles, recognized in the pacts or treaties of different nations, acquire the sanction and force of National Law, if such principles are established on the foundation of natural justice; although the pacts themselves may afterwards be annulled, and become extinguished, by the subsequent hostility of the

contracting parties: and this is more especially true, where such pacts, instead of professing to extend the natural rights of mankind, in behalf of the parties concerned in the pact, beyond those limits within which they are necessarily contracted, in time of war, between the belligerent parties themselves—do no more than express a confirmation of those fundamental rights which have been incorporated into the Law of Nations, for promoting the general weal of the great community of neutrals, under the sanction of perfect justice. If the thing stipulated by treaty, to be performed, be in itself lawful and right, and such as the party by whom it is to be performed is under a pre-existing obligation to do, the moral obligation imposed on him, previously to the treaty, to do that act, is not enhanced in *foro conscientia*, by his express engagement to do it: and, consequently, it cannot be inferred, that, because a duty is thus expressly stipulated to be performed, its obligation did not previously exist—no more than it can be justly said, that, because a man has given his creditor a bond, by which he binds himself to pay the obligee the amount of a simple-contract debt, that he had antecedently contracted no obligation to pay, existed prior to the date of the bond. Human laws may attach penalties to the non-performance of contracts; but the inherent force of the obligation to perform is not thereby changed. Thus, too, a public treaty may enjoin upon the parties the fulfilment of certain specified duties, on stipulated terms and conditions: yet, if those duties be correlatives of such unalienable rights as are sanctioned by the Law of Nature, the obligation to fulfil them does not result from the stipulations of the treaty, but has a permanent existence independent of it. Particular privileges, resulting wholly from the artificial institutions and arrangements of society, and not being founded on the natural and unalienable rights of man, may rightfully become objects of stipulation in treaties between independent nations, if they respect the performance of such acts as are in their own nature just: and privileges of this description may be abrogated, by mutual consent of the contracting parties, without any breach of moral obligation. But, when the unalienable natural rights of mankind are attempted to be either invalidated or restricted by the provisions of a public treaty, the stipulations, tending to that end, have no lawful obligatory force whatever. Hence, when two or more nations, either by engaging in a state of warfare, or otherwise, restrict among themselves the enjoyment of those natural rights which are the common property of all nations, such restrictions ought not to affect—and cannot do so, in reason or in justice—those nations who are neither parties to their acts nor in their hostility. On the other hand, every re-

cognition in a public treaty, of the natural rights appertaining to the intercourse of all nations in amity with each other, is not only obligatory on the parties to such treaty; but the principles so recognized, though having their foundation established on a pre-existing and independent authority, which no human laws can invalidate, acquire, by such express recognition, when once made, that kind of general and permanent establishment, of which every nation (not otherwise incapacited) may rightfully claim the benefit. The recognition of the principle is evidence of its admission by the party making it; and, notwithstanding the measures and conduct of nations between whom treaties subsist, may, from various causes, eventually differ from the stipulations of the contracting parties, the recognized principle becomes permanent, and retains its original obligation and lawful force."

The declaration made by our envoys to France, Messrs. C. C. Pinkney, Marshall and Gerry, "that the armed neutrality introduced a new law of nations; that the compact was confined in its objects and its duration; that it could not change the rights of nations not parties to it; and that, being temporary and partial, it did not radically and generally change principles before universally adopted;" Mr. B. pronounces to be wholly "erroneous and unwarranted." So far from its being a new law, or of a partial and temporary nature, he contends that all the several states, in their declarations, considered it as *establishing a permanent system of neutral maritime rights, grounded on the law of nations, so as to serve as a law of future times.*

"It is evident," says he, "that there is not a state in the civilized world, possessing an extensive navigation and considerable maritime commerce, that has not directly, at some period within the last two centuries, testified its assent to the principle, that free ships make free goods; and who have not all (the dependent monarchy of Portugal alone excepted) either expressly or virtually recognized the same principle, as established by the treaty of Armed Neutrality, in 1780. Numerous public treaties, and other national acts of equal notoriety, abundantly testify in favour of the legitimacy of that principle, which became finally established in consequence of the Armed Neutrality. They constitute, collectively, what Lord Somers called, on a different occasion, the judgment of whole kingdoms and nations. To such 'authorities' as these, who will oppose the speculative opinions—or, more properly, the mere *dictums*, of writers on the Law of Nations? What weight is due to the opinions of Grotius, Loccenius, and others—even the antiquated *Consolato del Mare* (that 'book of great authority!')

considered as *authorities*, when opposed to the decisions of many great and enlightened nations? The candid inquirer after truth will readily determine, that, in such case, they are entitled to none—without being biassed by influential names or traditional prejudices."

Nine treaties are enumerated, made between the United States of America and the several states of Europe since 1780, and three between European nations, which contain stipulations for the observance of the principle that free ships make free goods. A catalogue is subjoined of *thirty-three* treaties, from 1646 to 1801, between the maritime nations of Europe, which recognize the same principle; and this list may be augmented by *twenty* more, which Mr. B. finds referred to in a letter of Mr. Joel Barlow, of December, 1799, and which he thinks correct.

We cannot forbear remarking, in this place, that while Mr. B. denies all *authority* to the *theoretical* writers on the law of nations, and to those *conventional* or voluntary pacts which contradict the unalterable principles of justice, and the natural and unalienable right of mankind, he appears to rely much more on the numerous quotations from the authors he has cited, and the treaties he has adduced, than on any connected theory or system of general reasoning of his own. To the long list of treaties brought in support of his position, his antagonists are always ready with the answer, that any majority of the number of treaties admitting any particular principle or rule of conduct between the parties, cannot rationally or legally be allowed as binding on those who have not so contracted; that such solemn pacts are undoubtedly good evidence against the parties, as to the principles recognized and admitted by them, but extend their operation and authority no further. The advocates for the neutral doctrine contended for by Mr. B. to stand on the broad and sure ground of universal law, must resort, as this writer, in a former part of his work, has attempted, to higher sources—to that natural law which is binding upon all nations, and exists independent of particular compacts. It is of importance, in all general reasonings on this subject, if clearness and certainty are sought after, to keep the natural law distinct from the conventional: the one is certain, uniform and unalterable; the other ambiguous, contradictory and fluctuating.

In *section third* Mr. B. treats of "neutrality and the rights of neutrals, as deduced from the nature of war." The following extract will serve to show his manner of reasoning on the subject.

"Man is a free agent; and, in the words of the constitution of Pennsylvania, has an inherent and indefeasible right of pursuing his own happiness. His political liberty consists in his not being obstructed, by any positive regulation of society, from prosecuting that object, in such manner, and by such means, as he may think proper, provided they do not tend to infringe similar rights appertaining to others.

"Commerce is calculated to meliorate the condition of man, and to enlarge the sphere of human happiness: it has, consequently, its appropriate rights, founded in nature.

"But, since those occasional conflicts of hostility which occur between distinct and independent communities of men, seem to be inseparable from the condition of our species—being, as it were, the necessary consequences of human imperfections and frailties—a new class of rights (as they are called) has arisen, as the necessary consequence of that state of things. These are denominated by civilians, the *rights of war*.

"Although these are styled rights, they cannot, in strict propriety, be considered as such. War is confessedly an evil. 'Were men always rational (says M. de Vattel) they would terminate contests by the arms of reason only: natural justice and equity would be their rule, or their judge. Force is but a wretched expedient against those who spurn at justice, and refuse the remonstrances of reason; but this is the ultimate method to which a nation must have recourse, when every other proves ineffectual.' The same author farther observes, that 'the right of using force, or making war, belongs to nations no farther than is necessary to their *defence*, and the support of their *rights*.' There is a mutual connection between human felicity and the precepts of eternal justice: consequently, the Author of nature, to use the words of Judge Blackstone, 'has graciously reduced the rule of obedience to this one paternal precept; that man should pursue his own true and substantial happiness.' 'This (he adds) is the foundation of what we call ethics, or natural law.'

"The enjoyment of life, liberty, and property, are human rights of the highest order: yet the destruction of these *rights* is the effect that war is calculated to produce. Their infringement is punished by the laws of civil society. The violation of either is an injury; and constitutes an offence, criminal in its own nature. Yet war authorizes the slaughter of the human species, the captivity and thralldom of our fellow-men—and the robbery and plunder of their property! If, then, the maxim be just, as undoubtedly it is, that *no right can be founded on an injury*, how can we speak correctly of the *rights of war*? Grotius treats '*De Jure Belli ac Pacis*:' but Puffendorf observes, that the word *jus* is a very wide and ambiguous term. Be-

sides its being used to signify a moral right, it is also taken for law, and for a system or body of municipal laws or constitutions; and likewise for a sentence pronounced by a judge. What are called the rights of war may, therefore, with more propriety, be considered as rules or regulations adopted by the consent of nations, regarding the conduct to be pursued, in certain circumstances, not only by the belligerents themselves, but by neutrals. The progress of civilization, and the consequent refinement of sentiment and manners, have introduced, in the conduct of war, practices tending to repress that ferocious, vindictive and exterminating spirit, which is excited by the natural impulse of the human passions, between nations engaged in hostility: and these practices, sanctioned by humanity, have acquired the force of laws. But there are also regulations of war affecting neutrals, as we have already observed. The very meaning of *neutrality* imports that the neutral nation does not intermeddle with the quarrel between the warring powers. It is to show no preference to either, in regard to the matter in dispute; and, of consequence, it is bound not to yield any aid or succour, unless previously stipulated by treaty, that can be immediately employed in war, to one, whereby the comparative strength of the other would be diminished; nor to do any act whatever that would give a direct superiority to either: because, were the neutral power to do any of these things, it would cease to be neutral, and render itself liable to be considered as an auxiliary party in the war; thereby subjecting itself to the consequences of that situation. Hence, arms, ammunition, and such other articles as serve for the immediate and appropriate purposes of war, are forbidden to be carried into the territories of a warring nation, being denominated contraband of war: and, because princes and states consider themselves justifiable in endeavouring to reduce to their subjection besieged and blockaded places, belonging to their enemy, by depriving them of every thing necessary for their subsistence and support, it is also forbidden to all neutrals to enter places so invested by the armed forces of another nation. With relation to such, all supplies whatever are considered to be contraband. Indeed, this principle has been carried so far, during the recent war, that a powerful, extensive, and populous nation, was attempted to be held in a state of *blockade*, in order that thirty millions of men, women, and children, might be *starved* into submission. The measure, however, failed; and afterwards the projectors of the plan were nearly overwhelmed by an actual famine, resulting from natural causes, unaided by similar interdictions on the part of any of their enemies.

Mr. B. admits the right of the belligerent to seize *goods contraband of war*, going to an enemy, though belonging to a friend, and to prevent all *access to a place blockaded or besieged*; but that, with these two restrictions, all the other commercial rights of the neutral remain as if no war existed. He may continue his *customary trade* without molestation, and it is only a *deviation* from that customary trade, manifesting a *preference* of one party to the other, that amounts to a breach of neutrality. These principles he supports by quotations from Vattel and other writers, and from the declarations and reasonings of our own government.

“When it is considered that neutrals have a right of enjoying, during a war, all the commercial advantages which they were justly accustomed to possess in time of peace, excepting only the transportation to an enemy, of articles contraband of war, and of any kind of goods to a blockaded port, it follows, that the principle of a neutral flag making free goods results from a natural right necessarily attached to the free pursuits of commerce: For, as the neutral nation would have had an undoubted right to carry in its ships, in time of peace, goods, the property of any other nation that chose to lade them therein, and as the commercial rights of the first can become no otherwise justly restricted by the subsequent event of war than with respect to contraband goods and blockaded places, it is such designation only of the goods that can divest the owner of the neutral ship of his right of carrying them to the place of their destination. This is a privilege appertaining to the condition of a neutral nation, as such, which it cannot surrender without a breach of its own rights and interest, and which no other nation can lawfully infringe.”

“If a nation, engaged in war, permit neutral ships to be carriers of its goods, subject to the two admitted cases of restriction, under the law of nations, the right to do so is complete between the party owning the goods and the party carrying them: and, the goods being such as do not relate to war, and the trade being also of that nature which does not favour the arms of one to the detriment of the other, no power at war can have a right to interrupt it. It is the natural right of enjoying this freedom of maritime commerce, that is recognized and established by the various treaties and leagues (particularly that of the armed neutrality in 1780) which constitute what is now termed the modern law of nations: and it is on this just and reasonable foundation that the rightful exemption of enemy's goods from seizure, when laden in friendly ships, is rested.”

“The United States have manifested their adherence to the modern usage of nations, in every instance, excepting Mr. Jay's

treaty, from the commencement of the American revolution to the present day. The first conventional transaction of our government with a foreign nation was their treaty of amity and commerce with France, in 1778; and the last was the convention between them and the French Republic, concluded September 30, 1800. Both of these, as well as every intermediate maritime treaty made by the United States, with the single exception already mentioned, adopt the modern construction of the law of nations. While Great-Britain adheres to the ancient construction (in theory at least), as maintained by writers on the law of nations, the United States of America, and other maritime states, adopt the principles of that law, recognized in modern treaties, which have established an usage of nations, with respect to neutrals, infinitely more conformable to reason and natural justice. Whatever may be the ancient law, considered as a mere theory, we have in fact adopted the principles of the modern law (so to speak), conforming to the 'modern usage of nations,' to use the words of the proclamation of neutrality. Men in this country, of acknowledged abilities and patriotism, who have been induced to favour the ancient theoretical system, viewed merely in that light, have abandoned it in practice, seeing it to be clearly more consonant to natural equity and right reason, to conform, in their application, to the principles on which the modern usage is established. Now, as no principle of the law of nations is more unequivocally recognized by modern treaties and usage, than the one contained in the proposition that free ships make free goods, and as this principle is, in its own nature, just and equitable, the United States are bound, by an obligation of the most sacred kind, stedfastly to adhere to the principle, in the formation of every maritime treaty hereafter. They are bound to do so by the relation in which they stand to the great community of neutral nations; and it is, moreover, a duty that involves the rights and interests of the American people, as a free, independent, and great commercial nation."

Mr. B. then proceeds to consider, in the *fourth section*, what articles ought to be considered as contraband of war, and how the right of search ought to be defined and regulated.

To determine what is properly contraband, we are to inquire whether the article under examination may serve to the direct and immediate purpose of war, "without being wrought up, or otherwise materially varied in its form." Without this principle of construction, many of the raw articles of trade, the natural products of America, such as ship-timber, masts, iron, tar, and even clothes and leather, might be deemed con-

traband, as they are obviously susceptible of being worked up, and adapted to warlike purposes. Mr. B. censures severely the treaty between the United States and Great-Britain, concluded by Mr. Jay, for admitting the right of the latter to *seize provisions*, and he quotes several authorities and treaties from foreign countries, and our own, to prove that neither provisions, ship-timber, iron, tar, copper, hemp and pitch, ought to be reckoned among contraband articles.

A distinction has been made by those who reason in favour of the restrictions imposed on the neutral trade, in articles of direct or indirect use in war; namely, that the neutral has no right to *carry* these *offensive* articles to the belligerent, but may lawfully sell them, in their own territory, to whoever will come and *fetch them away*; that it is by his *activity* in supplying the belligerent, that the neutral does, in truth, depart from his neutrality; but while he limits himself to the free and equal sale of these articles to both parties who *come* to purchase them, the question of contraband can never arise. It is the carrying of contraband goods to one of the parties, not the *whole trade* in such articles, that the other belligerent contends he has a right to restrain or prevent.—The distinction is an important one for the belligerent; and, if we consider the ruling principle of trade, and the practice of nations, it is not easy to imagine how a real and strict neutrality can be preserved in any other way. Yet plausible as this reasoning may appear, we apprehend the *active* spirit of the people of the United States will not suffer itself to be confined to a *home* trade in those native productions which may be of immediate use to the warring nations of Europe. The freedom, in this respect, for which Mr. B. contends, is too consonant to their interests and wishes not to appear just and reasonable.

“Nothing is contraband by natural law,” observes Mr. Webster, in his Essay on this subject. (See Schlegel also). Contraband is the creature of positive or conventional law. The very term implies that such articles have been prohibited by *authority*; but where is that authority whose *proclamation* has made the carriage of certain articles *unlawful*? If the absolute freedom of commerce to neutrals be a necessary principle of natural law, then contraband of war cannot be lawfully seized unless by express stipulation between the warring and neutral parties. If certain articles are allowed to be contraband and seizable, because the selling of them to one belligerent is a violation of the rights of the other belligerent,

why may not the prohibition be further extended to the commerce of the neutral, when that commerce clearly opposes the exercise of the rights of war? These questions lead to views of the subject that, in general reasoning, may involve considerable difficulties, the solution of which, were we to attempt it, would draw us aside from our present purpose.

It is admitted by all writers, that the neutral cannot interpose in the war; and, therefore, ought not to carry to either party articles of a direct warlike use.—What those articles are which shall be thus contraband, and the interpretation of treaties in which they have been enumerated, have given rise to more discussion and controversy among writers and civilians than any other branch of the law of nations. In modern treaties there appears to be a disposition to confine contraband within narrower and more certain limits. It seems difficult, however, if not impossible, to lay down any general rule that would put an end to all doubt and controversy on the subject, since there are many things of a doubtful or *double nature*, which, whether intended for peaceful or hostile purposes, can be determined only by the existing circumstances of the parties. And where treaties have not specified what is contraband, there appears no certain and unerring light to be drawn from theoretical writers, whose general principles, and their application to particular cases, have too often afforded matter for dispute and litigation.

Admitting the right of the belligerent to seize articles *contraband of war*, laden on board of a neutral ship, and goods carrying to a port actually blockaded, Mr. B. limits the right of *search* to those two cases, and to those precise *objects*. To search for *enemy's goods*, generally, he deems unwarrantable by the law of nations.

As to the *mode* in which this right of search is to be exercised, Mr. B. is of opinion, that,

“If this question were to be considered, abstractedly from the practice and authorities, it is conceived that justice would dictate an answer not strictly corresponding with either. The maritime commerce of nations should be as free as possible from vexatious interruptions and hindrances. It is the duty and policy of every maritime state to take care that its merchant-ships be provided with fair and regular ship-papers, exhibiting a true and faithful specification of the cargo, its destination, &c. All illicit and irregular trade ought to be discountenanced, and rendered liable to severe penalties. On the other hand, full faith and credit should be given by one nation to the acts and proceedings of another, duly attested and ve-

rified, according to known and established rules of the government. It is certainly derogatory from the dignity of a free and respectable nation, that the official attestations of certain facts and truths, *bona fide* made by the public agents of its government, should be deemed unworthy of credit by those acting under the authority of another state. The deportment of states towards each other ought to be fair and honourable. It is presumed to be so, unless their conduct manifest the contrary. Sea-papers, therefore, relating to the shipping and marine trade of a particular country, and verified in due form by officers of the customs, admiralty, or other proper agents of that government, should justly meet with full faith and credit from the public agents of other nations. The exhibition of such documents, by the neutral to the belligerent party, ought to be deemed satisfactory. An *examination of this kind* would answer all the *honest* purposes of a search, without injuring the party examined, or dishonouring his nation. But, as the mode of search is now conducted, honour, good faith, and common honesty, seem to be little regarded: nor will it be otherwise, until a spirit of magnanimous justice shall induce nations to abolish the infamous business of *privateering*. M. de Vattel observes, that, 'without searching neutral ships, the commerce of contraband goods cannot be prevented;' and, from this necessity, he infers the *right* of searching. The necessity of *examining* neutral ships is readily admitted: and, if the examination be so made as not to detain or otherwise injure the neutral property, and not reflect any indignity on the neutral nation, we shall *so far* acknowledge the right of searching."

This opinion concerning the credit to be given to the ship's papers and documents duly authenticated, is confirmed by the authority of Vattel; by various old treaties, between Holland, France, Great-Britain, &c. and by all the maritime treaties which the United States have formed, excepting the one with Great-Britain. The claims and practice of Great-Britain, in subjecting all neutrals, whether under convoy or not, to an actual and rigorous examination, without regarding the documentary evidence of the neutrality or legality of their cargoes, Mr. B. considers an "odious usurpation of power, wholly unwarranted by the true principles of law; an outrageous violation of the rights of neutrals; a gross and humiliating indignity offered to the nation whose flag is thus insulted, and whose citizens are thus injured and abused."

Though in censuring the conduct of the belligerent party, Mr. B. confines his remarks wholly to Great-Britain, it cannot be concealed that *France* also has subjected the commerce of

the United States to restraints equally vexatious and oppressive. Indeed, whatever may be the dictates of justice and philanthropy, or whatever may be our wishes on this subject, experience forbids us to believe, that these two great commercial and maritime nations, when engaged in a war with each other, will permit, in opposition to their supposed rights and interests, neutrals to supply the enemy of either with the means of annoyance, or those articles which are necessary to recruit and invigorate those powers which it is the purpose of each to weaken and subdue.

The *fifth* section contains a number of miscellaneous observations and reflections in relation to the subject. Mr. B. deplores the misguided ambition and folly of nations, which lead them to continual wars; he laments that the true principles of *morality* are so little understood and practised.

He reprobates the practice of *privateering*, as contrary to all the rules of justice and humanity. If the public cruisers of a nation at war were prohibited from molesting neutrals, and seeking to enrich themselves by capture, and were confined to the protection of their own commerce or the capture of their enemies only, the causes of maritime wars would be considerably diminished.

The "supplementary observations" relate to the conduct of Russia, Sweden, Denmark, and Great-Britain, in regard to their recent controversy, and the *convention* by which it was terminated.

"What a spectacle," says Mr. B. "does this exhibit to the world! We behold the youthful Alexander, just seated on the imperial throne of all the Russias, surrendering to Great-Britain an important maritime right, to which Russia was entitled, while she maintained the character of a neutral nation in time of war—a right which his illustrious mother, only one-and-twenty years before, had entered into a solemn treaty with the other maritime powers of the north, to defend by force—a right which was again confirmed, but a few months ago, by his father's ministry, in the convention negociated between Russia, Denmark and Sweden, the purpose of which was, 'to re-establish, in their former shape, the engagements which, in the years 1780 and 1781, constituted the system of the armed neutrality.' But the most extraordinary circumstance of all, is, that the treaty of amity, commerce and navigation, between Russia and Sweden, which contains an express recognition of the same right, was finally ratified by the present emperor, Alexander, only six days before he ceded that right to Great-Britain, in the late convention between the two powers."

This piece of history, indeed, affords matter for useful reflection. It proves how little reliance can be placed on *any nation*, whatever may be her professions of zeal for the maintenance of the freedom of maritime commerce, since, with the change of circumstances, each is found to accede to or deny the principle, or become indifferent to its operation, as motives of policy or interest may dictate.

We shall now dismiss this volume, with remarking, that though it may not be regarded as a complete, well digested and elaborate treatise, it will be found of considerable use to those who direct their inquiries to this interesting and important subject.

ART. V. *Observations and Advices for the Improvement of the Manufacture of Muscovado Sugar and Rum.* By Bryan Higgins, M. D. In three Parts. Part i. 1797. pp. 116. Part ii. 1800. pp. 132. Part iii. pp. 328. 1801. 8vo. St. Jago de la Vega (Jamaica). Aikman. With twenty Plates.

CERTAIN difficulties in the preparation of sugar from the sugar-cane have long perplexed the proprietors of West-India estates. The plantations either did not afford the full amount of expected crop, or, if they did, there was some bad management in the manufacture, which led to great waste and loss. The sugar was deficient in quantity or quality, or was sometimes faulty in both respects.

There were also equal, if not greater embarrassments in the distillation of rum from saccharine matter. This ardent spirit was so empyreumatic, fiery and pungent, that in its new state it was not fit for sober drinking, but only sought after and consumed by the most indelicate *drammers* and tipplers. And the only known remedy for these disagreeable tinctures of the rum was long keeping, by which, as it acquired age, it somehow lost its peculiar offensiveness. But the inactivity of capital, during the years that were expended while the spirits were thus growing oily and mellow, was a serious inconvenience to the man of business. And the case was the more intricate for this reason, that the drinking of *new* rum, besides its disagreeableness, was unwholesome in a much greater degree than it would be, if suffered to grow *old*.

These impediments to profit did not escape the vigilance of private interest. Many and various schemes were devised to

improve the processes for boiling, clarifying and graining the sugar; and many projects were tried to give to the rum, when fresh from the still, that mildness and flavour which would render it immediately fit for grog and for market. None of the modes which had been attempted answered the full wishes of the planters. Neither sugar nor rum was prepared with the requisite skill and economy. And while the consumers complained that the former was not so clean, nice and sweet as their palates desired, and that the latter almost strangled and burned them as it went down their throats, the proprietors were groaning, that, through want of art to prepare the articles more completely for market, the product of their labour and stock fell far short of its proper amount.

These evils were so great, that the proprietors of Jamaica estates determined to prevent them, if within the reach of human ability. And as practical artists had failed of success, they resolved to try whether their objects could be furthered by the adepts in science. For this purpose they applied to Dr. Higgins, of London, and retained him, by an adequate pecuniary allowance, in their service. They even sent him on a mission to the Island of Jamaica, with instructions to investigate thoroughly the processes for making sugar and rum, and to remedy their defects.

This gentleman was by profession a physician. He had been many years a lecturer on chemistry. He had distinguished himself by several written works of merit. He possessed so much chemical experience, ingenuity and acuteness, that perhaps there could not easily have been found a man better fitted than Dr. H. for this undertaking.

The volume before us is the result of his economical labours. The subjects are important, not only to the West-Indians, but to every person who consumes their produce. When it is considered that almost all among us mingle sugar with their food, and a great number, unless they take it clear, add rum to their drink, it must be allowed that the experiments, observations and opinions of such a man as Dr. H. are well worthy of attention, both in a medical and dietetical point of view. With these preliminary remarks we shall proceed to the examination of his book.

Experience taught Dr. H. that in order to produce good sugar and rum, the cane-juice ought to be worked to syrup or sugar *as quick as possible*. The sugar was thereby improved in colour, in grain, and in purity. And the sweets of the still-house were separable from the foul and putrefactive mat-

ter which vitiated the rum. He therefore undertook to accelerate the boiling of the juice by new-modelling the furnaces, by a more economical and just application of heat, and by a due proportion between the kettles and the mills on the plantations.

The first part of his work, therefore, consists, in a great measure, of practical details to masons, overseers, and planters, for altering their old boiling-houses, and constructing new ones, so as to expedite the conversion of juice into sugar, by a proper adjustment of the apparatus to that object, and with a due regard to abridgment of labour and saving of fuel. These refer chiefly to the proper construction of what are called *leach-furnaces*; to the working of the clarifiers and grand boilers over separate fires; and to the choice of bricks and cements for withstanding long and intense heats.

The remarks on bricks and cements for furnaces are so striking, and are applicable to such extensive use in the erection of other furnaces than those intended for the boiling of sugar, that we insert them entire, from p. 90.

"There are five kinds of earths, two of which, namely, the magnesian and barytic, do not much concern the mason. The other three are the quartzose, the calcareous, and the argillaceous.

"Stony substances are hard generally in proportion to the predominance of quartzose earth in their composition; and pure quartz or rock-crystal, or any hard stones broken in grains, in mountain torrents, or in the surf of the sea, or by other means, constitute sand.

"Stony substances are soft to the touch of steel, in proportion to the predominance of argillaceous or calcareous earth generally. And the predominance of argil in a mass whose parts are but weakly coherent, gives it the character of clay. Such a mass, duly moistened with water, is plastic and adhesive, and by these qualities fit for the potter, and, in some instances, for the mason.

"In the ordinary fat tough clays, about one half is argil; the remainder consists of fine powder similar to that of rock-crystal, or of flints, or of mixed hard stones, containing magnesia and various earths, with a little iron, generally. Such masses are too tough to be moulded without great labour; and they shrink so much in drying, as to be unfit for the brick-maker, until he mixes them with sand or something equivalent.

"A native mixture of such clay with sand constitutes loam, and the best kind of sand in loam is that which is micaceous, or consists of fine thin shining stony scales. For the quartzose

loam, or that containing quartzose sand, does not bake so hard in a moderate fire as that which is micaceous.

"None of the simple earths can be rendered soft or glassy by the heat of ordinary furnaces; but certain mixtures of earths may easily be vitrified. Lime or magnesia, or both, promote the vitrification of clay and sand or quartz. Quartz and clay have little or no effect towards the vitrification of each other; but mica, in which magnesia predominates, with lime, promotes the agglutination of all the parts of a micaceous clay or loam, in baking, without inducing so much fusibility as might alter the figure of the body in any ordinary heat. Wherever a fat clay can be found, a loam may be made for furnaces, by the aid of sand, or pounded bricks, or of the clay itself baked and powdered.

"But in regard to native or artificial mixtures, it is to be observed, that ferruginous ochry matter, and the calcareous, are powerful fluxes of clays and loams. Either of these equally and naturally diffused in very small quantity, only promotes agglutination or hardness: but either being blended in excess, or distributed in detached lumps, renders the loam unfit for the construction of the fire-face of a furnace, whether in the form of brick or of cement: Because such brick or cement melts by heat, or shivers by alternations of heating and cooling. Such excess may easily be discovered, and the loam to be used for fire-brick or cement may be sufficiently tried in the following manner. It is to be rendered soft, or almost liquid, with warm water; and into half a wine-glass of this mixture, a table spoonful of lime-juice, or lemon-juice, or vinegar, is to be stirred at once. If the effervescence be strong, the loam will not answer for fire-work; if there be very little or no effervescence, it may be accounted good, provided, by baking a little of it on a smart fire, the quantity of iron be not so great as to give the appearance of a black slag. The quantity of iron which makes a brick assume a reddish brown colour, or a colour resembling that of the surface of pig iron, is not injurious. This last colour indicates another metallic matter called manganese.

"Any brick, whether white, yellow, red, or iron-coloured, will serve for fire-faces, provided it neither melt nor shiver in the fire. Hard iron-coloured fire-bricks are the best at the fire-place, where the raker touches. Those which may easily be sawed or cut, are the best in curved faces and arches.

"The cement of a fire-facing ought to be loam or clay fit for making fire-brick. For mortar, whether made with lime and sand, or with lime and brick-dust, or with lime and ashes, vitrifies all that it touches, in great heats, and crumbles in smaller heats, so that the work which is dependent on it, falls to ruin.

"The reason of this, and the proper use of mortar, will appear in what follows.

"Lime-stones, chalks, and divers marbles, whose earthy matter is almost entirely of one kind, and which consequently sustain great heat without undergoing any vitrification, consist of calcareous earth combined with carbonic acid, in the proportion of nine to seven nearly.

"By the strong heat of a well ventilated lime-kiln, the whole of the carbonic acid is expelled, and sixteen parts of lime-stone, or of chalk or marble, are reduced to lime weighing only nine.

"This mere calcareous earth or lime is soluble in about 680 times its weight of water; and when only wetted, it forms with sand an adhesive plastic compound, which hardens, not merely by drying, but by the accession of carbonic acid, which it attracts from the air.

"But in masonry exposed to fire, the best indurated mortar loses of its hardness and cementing powers, as fast as the carbonic acid is expelled by the fire. In alternate heating and cooling, the cement, disturbed through its substance by matter now expelled now regained, becomes friable and crumbled, and the work dependent on it is deranged and ruined; there the soonest where the pressure is greatest, as in piers and arches.

"Nothing of this kind happens to loam or clay used as the cement at the fire-face: and as hardened mortar is not injured by any heat, which the masonry of a teach furnace receives, beyond the depth of an inch or an inch and an half from the fire-face, so great a thickness of brick and loam is sufficient to protect the mortar and preserve the cohesion of the masonry, and to give tenfold duration to the whole furnace.

"In respect to the kind of mortar which is made with lime and the ashes of cane-trash, it is to be observed, that as the ashes contain a considerable quantity of saline matter, which disposed their calcareous earth, and the bricks they touch, to vitrification, such cement is apt to fail by vitrification, where it is much heated, and by the causes above described, and affecting the lime, where the cement is less heated."

Dr. H. thus describes the cane-juice of which sugar is made, p. 94.

"Sound cane-juice consists of water, sugar, deliquescent sweet, herbaceous matter, carbonic acid, and molasses acid: And some juices contain variable quantities of other ingredients which are not yet to be noticed.

"In these pharmaceutic ingredients subsist the primary or chemical principles of many vegetable acids. But experience

shows that the composition of attractive forces, resulting from such proportions of the principles as take place in the recent juice, tend chiefly to the formation of an acid similar to vinegar, and of an additional quantity of carbonic acid and molasses acid.

“For in the course of 12 or 18 hours the juice mantles by the rise and escape of carbonic acid in the elastic state: At an earlier period it smells sour or acetous; and, by the effect of such delay on the sugar producible from it, it is certain that there is an addition to the original quantity of the molasses acid.

“This last is the ingredient which most powerfully impedes the crystallization and separation of the saccharine matter, from the deliquescent sweet and mother-liquor called molasses. As it lessens the quantity of saccharine crystals and increases that of molasses mother-liquor; and as it is highly probable that molasses contain the like acid as a constituent principle, I give it the temporary name of molasses acid.

“Herbaceous matter is that of which some part shows itself in the *yawing*, and more in the boiling of juice which had been cleared from gross filth by filtration. It is that which we endeavour to separate from the saccharine liquor by *yawing* and skimming.

“The herbaceous matter has some analogy to gummi-resins; but has a much nearer similitude, in chemical character, to the dregs of refined indigo, or that vegetable substance which constitutes the chief difference between the finest and the basest indigo.

“The herbaceous matter of cane-juice, like that of indigo, varies with the constitution of the plant in different soils and seasons, and especially in respect to its solubility: insomuch that some juices hold about $\frac{1}{300}$ th part of it in strict solution after boiling, whilst others hold not 1000th.

“But as herbaceous matter is rendered more soluble by the intervention of carbonic acid; any cane-juice holds more herbaceous matter in solution, before it has been heated, than it can retain at the temperature of yawing or boiling.

“For in the augmented temperature, the carbonic acid forsakes the herbaceous matter to combine with that which makes the acid aeriform; the minute gaseous bubbles in their escape agitate and impel the particles lately thrown out of solution, until in their coalescence they become not only visible but large. We may express this change in the clear recent juice by the agency of fire alone, as the workmen do, by saying the liquor breaks.

“Fresh cane-juice begins to break, when the heat approaches to 140 degrees of Fahrenheit; and the herbaceous matter which has felt no greater heat, has an olive green colour.

“ Whether this be exposed to greater heat, or we advert to that which is thrown out during the subsequent reduction of the juice to sugar, the herbaceous matter is found to change colour with the increase of temperature, through gradations of yellow, olive, and brown, increasing in intensity and darkness, until the matter is charred to blackness. As it changes in colour it becomes less soluble. The carbonic acid continues to escape, and the extricated herbaceous matter accumulates to the surface, whilst the liquor is heated to 195.

“ Now the watery vapour arising with the carbonic acid bubbles, pushes the cleansed liquor, frothing white, through intervals in the swollen scum. This, which is called yawing, shows that a greater heat would cause a boiling commotion. But if some time be allowed for the residuary carbonic acid to escape, the liquor will not boil until this heat amounts to 206, or within five degrees of the heat of boiling water.

“ The aeriform bubbles entangled in the herbaceous matter render it more buoyant than it would otherwise be, and enable it to carry with it and to sustain at the surface, any accidental filth of the liquor: And the scum thus produced is by its own nature sufficiently tenacious to be separable by the skimmer, or by drawing away the depurated juice from beneath it.

“ But if the buoying bubbles be expelled by greater heat and the commotion of boiling, the scum will be broken into the liquor.

“ The skimmer will now avail nothing; but the herbaceous matter once thrown out of solution will subside with the filth, in an hour, in a cooling quiescent liquor; and will leave it transparent, although it still retain that quantity of herbaceous matter, which the water, with the last adherent portions of carbonic acid, can dissolve.

“ But as this depuration by subsidence cannot be awaited, without injury to the juice, the foul scum ought to be removed before the liquor boils.”

After these remarks, observations and directions on the quickest manufacture of muscovado sugar, follow others on the employment of lime to temper the redundant carbonic or molasses acid; on an improved mode of filtration to remove the herbaceous matter, and other foul and feculent substances; with cautions against burning or charring the sugar in the boilers. The subserviency of all these measures to the improvement of rum is thus stated by Dr. H. p. 111.

“ Concerning rum it is now to be observed, that it derives the depreciating characters of the recent spirit from two sources; the chief of which is the filth of the scums, and especially of the first scums in yawing.

“ The tendency of such matter, even if there were nothing verminous or animalcular in it, is to the putrefactive fermentation, or rotting; whilst that of the sweets is to the vinous fermentation, and thence to the acetous. The product of the former fermentation is as offensive to the smell and taste, and as noxious, as that of the latter is grateful and cordial.

“ Wherever scums are detained to await the spontaneous separation of the sweets from the filth, an intestine motion may be observed; and there chiefly, in the concurrence of these fermentations, the offensive product is generated. The rest is formed in the fermenting vats, in quantity proportionate to the filth of this kind which passes into them.

“ Every vinous liquor capable of yielding an intoxicating spirit by distillation, affords some quantity of peculiar essential oil, which awaits the rise of the water of the latter and weaker runnings, and characterizes them: Therefore this essential oil is in a great measure separable from the spirit by re-distillation, especially if salts retentive of the water, and restraining the volatility of the oil, be used.

“ But it is peculiar to the ordinary manufacture of rum, that a very offensive ethereal fluid is generated in these mixed fermentations; and that by reason of its volatility it is inseparable by re-distillation.

“ But from the source above-mentioned, the essential oil of rum acquires extraordinary nauseousness; and as a single re-distillation cannot exclude it totally, and as any number could not exclude the ethereal taint above-mentioned, the best new rum of any estate is that which runs intermediate, in respect to the offensive ether and the fœtid oily taints.

“ All rum is improved by time in wooden casks, by exhalation of ether and absorption of oil, and under a growing charge for waste, and for interest on the price; and some have improved it sooner by ventilation, but not without a great waste of the spirit. But now it may be remarkably improved immediately, by measures which prevent the described contamination: And the first of these is the abstraction of the putrefactive matter by filtration, and the immediate conveyance of the clear warm fragrant liquor to the working cistern, there to undergo the most timely and productive fermentation, and to suffer the least defalcation of spirit by foul scum and bottoms, which are generally thrown away.

“ Another source of the contamination is in the empyreuma: But as this regards the distillation, as well as the errors in making sugar, it is unnecessary to say more of it at present than that the prescribed measures, together with a judicious setting and management of the still, will totally prevent the empyreumatic smell and taste.”

The *second part* of the work is almost wholly occupied with details concerning the construction and working of filtering machines, with the advantages and inconveniences of general filtration, compared with more simple instruments for the filtration of scum only; and of further improvements in furnaces, arrangements of vessels, and the labour of the boiling-house. These matters, which are of great importance to planters, are not of so much moment to the generality of our readers, and therefore we pass them by.

A large proportion of the *third part* consists of recapitulations of what the author had advanced in the first and second parts of his work. After some remarks on flues, and other matters relative to furnaces, he comes to the prevention of empyreuma by too much heat in boiling, to saving expedients in fuel and labour, and to the adjustment of coolers.

Dr. H. then proceeds to the great object of his laborious researches, the *improvement of rum*. He has summed up his advices on this point in sixty aphorisms or sententious paragraphs (section xiii.), which are too long for insertion here. But we present our readers with the principle upon which they all depend, in the author's own words (p. 159), which we hope will be the more acceptable, as so large a proportion of West-India rum is consumed within the limits in which our work circulates.

“ The essential oils evolved in the vinous fermentation, are as different in smell and taste, as the fermentable subjects are different in kind or name; but in regard to the portions which accompany the water and spirits, in distillation, they agree in the common character of rendering the spirits, and especially the weaker runnings, ungrateful, if not unwholesome: And excepting what may depend on ethereal impregnation hereafter to be noticed, we may say generally, that the difference between any two or more of the spirituous liquors which are objects of commerce, depends on their essential oils. For as the proportion of these is lessened by the art of the rectifier or chemist, and by transpiration through wooden vessels, these spirituous liquors become mellowed and grateful, and approximate each other in medicinal and chemical character.

“ In charges productive of the best wines, or vinous liquors, this fermentation has its distinct time and progress, anterior to the acetous: but, in fermentable charges of different descriptions, such as those which yield the meagre or acerb beverages, and such as those commonly fermented for rum spirit, an acetous fermentation accompanies the vinous, or

acetous acid is formed in the very time of the vinous fermentation, to the perversion of ingredients that are common to spirit and to vinegar, and to another injurious effect hereafter to be shown.

“ In the fermented liquor from which rum spirit is to be distilled, as well as in divers others above-mentioned, acetous acid may subsist in considerable quantity along with the spirit, without uniting with it to form ether. But in the heat and vapour of the distillation, it is the nature of this acid to convert a proportionate part of the spirit into acetous ether, which, by virtue of its extreme volatility, rises along with the first and strongest spirituous runnings, and gives them smell and taste extremely ungrateful to every uncorrupted palate. Hence the adage that rum becomes more fiery by repeated rectification, such as serves to improve the European spirits; and the reason of it is, that the rectified spirit is but a part of the still-charge, and yet contains the whole of the ether.

“ The most judicious manufacturers of the more grateful spirituous liquors take the greatest care to exclude from the fermentative charges every vegetable matter or filth, which is incapable of vinous fermentation, and is prone to the putrefactive: for they are well aware that the putrescent matter tends to make the vinous fermentation tardy and sluggish, and to give a taint which passes from the beverage to the distilled spirit. In like manner, the manufacturer of spirit from the saccharine wash of the boiling-house endeavours, by skimming and subsidence, to free the sweet from the putrescent, herbaceous and filthy scums, previous to the setting for fermentation, and afterwards throughout the process. But as the depuration by these ordinary means is very far from being perfect, and as it is the nature of the saccharine juice itself to generate some acetous acid along with the spirit in the fermentation, the product from the fermented charge is of the vilest kind; for the spirit is not only charged with acetous ether, and the essential oil peculiar to this sweet, but with the tainting and oily products of the putrescent filth.

“ But as it is the nature of molasses to generate less acid relatively to the spirit in fermentation; and as much less of the putrescent matter above-mentioned accompanies this sweet in the fermentable charges, especially when they are made without any wash from the boiling-house, and without any dunder or refuse of a former distillation; the spirituous product in distillation differs from that last mentioned as much as it differs from malt spirit, and is highly preferable in smell and taste. It demands the name of *molasses spirit*, to distinguish it, in the following pages, from the spirituous product of the ordinary mixtures of boiling-house wash and mo-

fasses, with or without dunder, to which the name *rum* is to be confined.

"As the melioration of these, like all other spirituous liquors, by long keeping, depends on the escape of the offensive, oily and ethereal parts, which, sooner than the alkohol, penetrate and pervade wooden vessels, our first advices for the improvement of the manufacture are to show how it is to be uniformly productive of the utmost quantity of spirit, divested of the nauseous and depreciating ingredients, so far at least as to be capable of acquiring, in a short time, the flavour and value of good old rum, with the least loss of spirit by transpiration; and to be highly preferable, even when recent from the still, to any new rum of the ordinary process."

Dr. H. recommends the neutralizing the mischievous acid which contributes to form the fiery and nauseous ether, with a portion of the alkohol, by the use of lime-stone, p. 168; and of pot-ash, p. 214.

An account of a new kiln for drying coffee, interspersed with occasional observations on the business, concludes the work. Of the particular value of this we are silent; and as ours is not a country in which coffee is cultivated, we shall leave its merits to be decided on by the Jamaica planters.

ART. VI. *Histoire des Chênes de l'Amérique, ou Descriptions et Figures de toutes les Espèces et Variétés de Chênes de l'Amérique Septentrionale, considérées sous les Rapports de la Botanique, de leur Culture et de leur Usage. Par André Michaux, Membre Associé de l'Institut National de France, de la Société d'Agriculture de Charleston, Caroline Meridionale, &c.—i. e. A History of the Oaks of America, or Descriptions and Plates of all the Species and Varieties of Oaks in North-America, considered botanically, agriculturally, and economically. By Andrew Michaux, Member of the National Institute of France, of the Agricultural Society of Charleston (S. C.), &c. &c. Large folio. Paris. Crapelet. 1801.*

IN the advertisement prefixed to this superb and valuable work, we are informed that the author has spent twenty years in travelling in Asia and America; that, after his return to France, and while he was engaged in preparing the result of his observations for the press, he was appointed, by government, to accompany Capt. BAUDIN in his voyage to the

South-Sea. Before his departure he put the finishing hand to his History of the Oaks of America, and his Flora of North-America, and left the superintendence of their impression and publication to the care of his son. The second work we have not yet seen, though we believe it is now out of the press. The author promises, on his return, to give the public an historical account of his travels, which, we have no doubt, will prove highly interesting to botanists, as well as to readers in general.

In the *introduction*, after remarking on the word *gland*, nut or acorn, as used in different countries, M. Michaux speaks of the natural history of the oak.

"It grows," he observes, "naturally, in all parts of the temperate zone, Europe, America, and even in Africa. Its culture demands particular care, as transplanting, grafting, and other methods of re-production, are not always favourable to it. Nature seems particularly to have formed this tree for large forests. It there reigns the monarch of the woods, and supplies abundant food to different animals. In Europe, the deer, the roe-buck, the wild-boar, live, during the winter, on the acorns. In Asia, pheasants and wild-pigeons share the repast with the fallow herd. In North-America, the squirrel, the pigeon and wild-turkey, seek their food among the nuts of the oak. Many species of quadrupeds, and birds of that continent [American], having consumed the fruits of one region, emigrate, in innumerable flocks, to another more abundant.

"Of all the trees of the forest, the oak is that whose wood may be the most extensively and the most usefully employed: it serves for the construction of houses and ships, for instruments of husbandry, &c. it yields substances useful in medicine; it furnishes an article of almost indispensable necessity to the tanner, the dyer, &c. in short, it is the daily aliment of fire, so necessary to our existence.

"The *family* of the oak includes a great number of species which are not known, and the most of those which grow in America appear under such various forms when young, that they cannot be distinguished with certainty until they have arrived at maturer age. Nature seems to have intended the multiplication of this tree, and to render it of more general use, by producing under the same latitudes different species, accommodated to the diversities of climate and soil; for the oak does not always grow in forests, nor always to a great height: there are countries which produce only dwarf oaks, *le chêne kermes* (*quercus coccifera*), and a few others naturally small; while others, which grow among rocks, and on

the shores of the Mediterranean, are indebted for their diminutive size merely to the aridity of the soil in which they have taken root. There are also some varieties produced by causes purely accidental. In North-America there are dwarf scion-bearing oaks, whose numerous suckers cover large tracts of country. The savannas (*prairies*), situated in the midst of the forests of this continent, are annually burnt by the savages, and by new settlers, for the purpose of renewing the grass, by which the deer may be attracted, and for pasturing their cattle. These fires extending to the forests, and destroying the large trees, the horizontal roots of many species of the oak, detached from the trunk, produce again, by themselves, and separately, shoots, which afterwards, when two or three feet in height, yield fruit. Each bundle or assemblage of these shoots from the same stump may be considered as a dwarf tree, without a stem or trunk; for the fire, by destroying these trees down to the root, produces the same effect as the cutting off the stem and trimming does in cultivated pear-trees, which would otherwise become large trees, but by these repeated operations may be made to continue dwarfs, and to put forth its fruit-bearing branches from the very roots. Many travellers, not having time to observe these oaks with sufficient care, have considered them as a particular species; but the acorns, when sown, have sent forth, like all others, a descending root, without producing any suckers: it is therefore probable that there are no oaks naturally *stoloniferous*.

“Oaks present numerous *varieties*, and to determine the *species* to which they belong is very difficult. Often an intermediate variety appears to approximate two species in such a manner that it is hard to determine, from an examination of their leaves, to which of them it belongs. Some species, liable to vary when young, appear at that time so different, that, from the characters of the leaves, the same species cannot be recognized in the young and in the old individuals. Many others, on the contrary, present such an uniformity, that the specific differences can be ascertained only by the fructification, which is itself subject to exceptions and variations. It is only by comparative observations made on the individuals, when full grown and when growing, that we can distinguish the several species which bear so great an affinity to each other, and refer each variety to its proper species.

“The description of the oaks of North-America has been, for several reasons, hitherto, obscure and imperfect. 1. Botanists, who have visited that country, have given only detached observations on these trees, without regarding the character of their fructification. 2. Authors, who have treated on the subject after them, have often placed several species under

the same denomination. And, 3. The drawings which have been given of the American oaks, cultivated in Europe, are not always correct, because their growth is there retarded by a temperature less favourable than in their native country, and because they there preserve longer the varieties of foliation which mark their growing state.*

"To clear up my doubts, I have sown and cultivated, during my residence in America, all the species which I have had opportunities to observe and collect; and, after the second year, I had the satisfaction to recognize all the varieties which, when traversing the forests, caused me so much uncertainty. In tracing, with attention and assiduity, the variations which take place in certain species, from the time when they are young to the period of their maturity, I have discovered, in most young individuals, the stamp and type of their species. It is thus I have learned to distinguish their relations to each other. To make this classification, I have used the means furnished me by nature herself; but if, on the one hand, the observer who follows the steps of nature can, by the approximation of the species, discover the bond which unites them together, he will, on the other, find himself embarrassed, when he comes to decide on each species, and to assign to each its peculiar and distinguishing characters.

"I have endeavoured to arrange the different species of the American oak in their natural order. For this purpose, I thought, at first, that the parts of fructification would furnish me with the characteristics to establish their order; none of them, however, presented the means, and I found in them distinctions of little importance only, such as the fastening of the female flowers, sometimes almost *sessile*, sometimes *pedunculated*; the size of the fruits; their different periods of maturity, &c. After the formation of the seed-vessels I have not been able to establish a sufficient distinction. I have then directed my attention to the leaves, which presented me with the most striking marks of distinction; and I have used them to fix two grand or primary divisions in this family. The first comprehends the species with leaves *beardless* or *muticate*—that is, without setaceous points: under the second division I have arranged those, the top or notched edge of whose leaves is terminated by setaceous points.

"The interval of time which elapses between the appearance of the flower and the ripening of the fruit is not the same in every species of the oak: that period of fructification

* "Many of the plates given by Du Roi, and that of PLUCKNET, pl. liv. fig. 5. represent oaks which have not reached that state of perfection which belongs to those that are full grown."

which I have at first stated as insufficient to establish the two principal divisions, appeared to me, nevertheless, of importance enough to be admitted as a secondary character.

"It is well known that all the species of the oaks are of the class *monoecia*, and that, in the hard oak (*quercus robur*), and in many other species, the male flowers are situated in the young boughs which shoot out in the spring, and that the female flowers are placed on the same boughs above the male flowers. It is known also that both are *axillary*; that, immediately after fecundation, the male flowers wither and fall off, while the female flowers continue to grow until they arrive, in the course of the same year, to the period of fructification. This is the usual progress of nature; but it is not so in regard to many species of this family, in which the female flowers that appear in the spring remain a whole year without growing. It is to be presumed that these are not fecundated the first year, since it is not till after the second spring that they increase in size and arrive at maturity. There is then an interval of eighteen months from the time of the appearance of the flower to the time when the fruit is ripe. These considerations have led to two secondary divisions; the one comprehends the species which I denominate by an *annual fructification*—that is, such as the usual space of six months is sufficient to bring to maturity; the other includes all those species whose fructification is *biennial*—that is, whose fruit does not ripen under eighteen months. It must be observed, that when the fructification is annual, it remains always *axillary*, whilst, in the species in which it is biennial, it is only so during the first year; but, in the second year, and when the leaves fall off, it becomes necessarily isolated. CLUSIUS has remarked on it, in regard to the *quercus cerris* (Linn.), whose fructification is biennial: his expressions are these: '*Flores racematim compactos ut quercus, à quibus uti nec in quercu nascuntur caliculi, sed ii brevi crassoque pediculo annotinis ramulis adhoerent, non in foliorum alis, omnino hispidi, &c.*' rar. pl. Hist. p. 20.

"We must except those whose fructification, although biennial, always remain *axillary*, because the leaves do not fall off—such as the *quercus coccifera* (Linn.) and the *quercus virens* (Art.) I have also remarked, that on the old continent oaks are met with whose fructification is biennial—such as the *quercus cerris*, *quercus ægylops*, *quercus coccifera* (Linn.), *quercus pseudosuber* (Desf.)," &c.

We shall present our readers with the arrangement of the *species* and *varieties* of the oak by M. Michaux. They are *twenty-nine* in number.

" *Quercuum Americanarum Dispositio Methodica.*

" SECTION I.

" *Quercus*, foliis adultæ plantæ muticis; fructu pedunculato; fructificatione annua; specie 6^a bienni.

" *Division I.*

" Foliis—lobatis.

- Sp. 1. *Q. Obtusiloba*—upland white-oak, iron-oak.
 2. *Q. Macrocarpa*—over-cup, white-oak.
 3. *Q. Lyrata*—water white-oak.
 4. *Q. Alba*—var. *pinnatifida*, } white-oaks.
 _____ *repanda*, }

" *Division II.*

" Foliis—dentatis.

- Sp. 5. *Q. Prinus*—var. *palustris*—swamp chesnut-oak.
 _____ *monticola*—mountain chesnut-oak, rock-oak.
 _____ *acuminata*—narrow live chesnut-oak.
 _____ *pumila*—Chinquapin-oak.
 _____ *tomentosa*—Illinois-oak.

" *Division III.*

" Foliis—integræ.

- Sp. 6. *Quercus Virens*—live-oak of Carolina.

" SECTION II.

" *Quercus*, foliis adultæ plantæ setaceo-mucronatis; fructu subsessili; fructificatione bienni.

" *Division I.*

" Foliis—integræ.

- Sp. 7. *Q. Phellos*—var. *sylvatica*—willow-oak.
 _____ *maritima*—sea-willow-oak.
 _____ *pumila*—dwarf-willow-oak.
 8. *Q. Cinerea*—upland willow-oak.
 9. *Q. Imbricaria*—shingle-willow-oak.
 10. *Q. Laurifolia*—swamp willow-oak.
 _____ *obtusifolia*.

" *Division II.*

" Foliis—breviter lobatis.

- Sp. 11. *Q. Aquatica*—water-oak.
 12. *Q. Nigra*—black-oak.
 13. *Q. Tinctoria*—var. *angulosa*—great black-oak, Champlain black-oak.
 _____ *sinuosa*, quercitron-oak.
 14. *Q. Triloba*—downy black-oak.

"Division III.

"Folii—profunde multifidis.

- Sp. 15. Q. Banisteri—running downy-oak.
16. Q. Falcata—downy red-oak.
17. Q. Catesbæi—sandy red-oak.
18. Q. Coccinea—scarlet-oak.
19. Q. Palustris—swamp red-oak.
20. Q. Rubra—red-oak."

The observations of M. Michaux on the *live-oak*, which is of so much value in ship-building, deserve the attention of the public.

"This species is not to be found far from the sea. It grows in the greatest abundance on the islands, and on the flat shores of the sea, most exposed to the stormy winds of the ocean. The low lands along the coast of North-America are of recent formation, having been abandoned by the sea at no distant periods, compared with the antiquity of the globe. The whole face of the soil is a bed of sand on a very deep stratum of clay. These maritime oaks increase rapidly, as the fibrous roots with which they are provided, while growing, easily extend themselves in every way through the sand; and, as they approach maturity, the main roots reach the bottom of clay, from which they receive a nourishment that preserves their strength for many ages. By these means, these trees are rendered capable of resisting the most violent storms, and of enduring the heat of a burning sun. From Virginia to the extremity of Florida, the traveller beholds this oak by itself, maintaining its full vigour under the rays of a sun in which other trees cannot exist. It is never injured by cattle; and, in all the habitations along the low country of the Carolinas and Georgia, the proprietors preserve it as a shelter for cattle during the winter, and to keep off the heat of the sun in the summer. Its foliage is very thick, and impenetrable to the sun's rays: the shade of a single tree often covers a space of more than 30 toises (180 feet). Its fruit is always abundant, and less harsh and disagreeable to the taste than that of many other species of the oak. We are told that the Indians of Florida extract from the acorns an oil, which they mix with their food. Hogs, and many wild animals, feed upon them. Its wood also is of an excellent quality, and held in higher estimation than that of any other species growing in North-America. In the Southern States it is used to great advantage in the building of ships, which last a great length of time. It is commonly cut at the end of autumn, and is not used until three months after. It grows to the height of 35 or 40 feet.

"The soil of South-Carolina and Georgia being the same as the heaths of Bordeaux, the maritime oak merits the attention of the French and Spanish governments. It presents the means of giving a value to the sandy plains which border on the Mediterranean and the Atlantic."

The *downy black-oak*, which may be found from New-England to Georgia, is of a very rapid growth, and M. Michaux is of opinion that it might be very advantageously employed to make enclosures or quick-set hedges. He recommends the sowing of the acorns plentifully along a trench about a foot wide. During the first two years the ground should be carefully howed and weeded. In the course of the fourth year the young stems will become crossed with each other, and in this way they will form a hedge extremely close and strong, and which will last for more than a century.

"It is best to sow the acorns as soon as they are gathered, but during the succeeding winter the rats and moles may destroy some of them. This inconvenience may be avoided by first putting them in tubs of light earth, and making them germinate there, and planting them afterwards. By this means you may be sure of success, and be certain of having an uniform hedge of any extent you please. The wood of this tree is often used for the *zig-zag* fences—a mode of enclosing productive of great waste."

This volume, enriched with thirty-six elegant engravings, illustrating the characters of the several species of the oak, contains the most complete and satisfactory account of that valuable genus of plants that has yet appeared, and will prove a great acquisition to the botanist.

The wide and indiscriminate waste of valuable forest-trees along the Atlantic coast, and near our navigable rivers, is already become a subject of regret. The great inconvenience that will be soon felt from the want of the timber of this oak to supply the increasing demands of a growing commerce and rising navy, will probably draw the attention of the government, or of the proprietors of the lands, to its preservation and culture.

ART. VII. *Quincy's Lexicon Physico-Medicum improved: or a Dictionary of the Terms employed in Medicine, and in such Departments of Chemistry, Natural Philosophy, Literature, and the Arts, as are connected therewith. Containing ample Explanations of the Etymology, Signification, and Use of those Terms. From the eleventh London Edition. With many Amendments and Additions, expressive of Discoveries lately made in Europe and America.* 8vo. pp. 646. New-York. T. & J. Swords. 1802.

DR. QUINCY's Lexicon has been long established in reputation, and is well known to medical gentlemen: for the greater part of those who have been regularly educated to that profession, since its first publication, have availed themselves of the aid it afforded to them while they were becoming acquainted with technical language. The motives which led to this New-York edition of the work, are contained in the following address of the publishers to the practical physicians and students of medicine in America.

"Although there are several Medical Dictionaries extant, yet there was a call for a new edition of the *Lexicon Physico-Medicum* of Dr. Quincy. His work was indeed first published many years ago, and has undergone various editions. And, in the mean time, Motherby's *Medical Dictionary*, and Hooper's work under a similar title, have been offered to the public in England. It might thence be supposed, by some, that imported copies of these two books would supply the demand within the United States.

"The publishers weighed carefully this consideration. They reflected that the large folio volume of Motherby, though an excellent performance, was too bulky and expensive for the greater part of readers. And on examining the duodecimo production of Hooper, they found, that although it would not be subject to the objection of an high price, yet that it laboured under the disadvantage of being confined to subjects merely professional.

"In short, it was highly desirable that a book of definitions and explanations should be offered to medical gentlemen, which should be cheaper than the former, and more comprehensive than the latter of these dictionaries.

"There was no publication extant which approached so near this character as Quincy's Lexicon. Without costing the purchaser more than a very moderate price, it offers him a great variety of matter. In this edition some obsolete terms have been left out. There was little use in perpetuating words that were never employed by any writer of note or value in modern times. To retain great numbers of hard

and uncouth names, which the present state of knowledge did not warrant or require, would be superfluous and disgusting, as well as perplexing to beginners. In these retrenchments, however, the reader may be assured not an article of worth has been omitted.

"In the place of the words left out on account of having become antiquated and fallen into disuse, a very considerable number of *new* articles have been added. Some of these are names and definitions not in the original. Others are modern expositions of titles already in the work, but standing in need of correction, to adapt them to the existing state of practice and experiment. And in numberless places of this New-York copy, the pages have been cleared of the typographical and scientific errors which abounded in the London text."

On looking through this ample volume, we find it very correctly executed, on a neat and fair type and good paper. It gives us no small pleasure to find, on comparison, that the edition before us surpasses the London copy: and we think it will prove a welcome offering to the lovers and cultivators of medicine in our country.

Many additions are made to the text of Dr. Quincy, including new developements and discoveries. Though we do not pretend to give a complete list of these, yet we mention the following as some of the most remarkable ones which attracted our attention:—*Aër, Aërostation, Alkalies, America, Ammonia, Anticrouon, Antiseptics, Association, Asthenia, Atmosphere, Azote, Azotic Gas, Ballstown, Barilla, Beef, Bile, Bilious Diseases, Calcareous Earth, Caloric, Cantharides, Carbon, Chemistry, Cleanliness, Contagion, Hydra, Hydrogen, Hydrogenous Gas, Infection, Lazaretto, Lues, Miasma, Nitrum, Oil, Oxyd, Oxygen, Pestilence, Pestilential Distempers, Phlogiston, Pot-Ash, Principles, Putrefaction, Puretos, Python, Quarantine, Salt-Petre, Septon, Typhus, Vaccina, Water, Wind, Xanthorrhiza, and Yellow Fever.* The greater part of these, amounting to more than half a hundred articles, are new, or nearly so. And in many other places we discover traces of an amended text. We therefore consider the work as substantially improved, and much increased in value.

On searching for the obsolete words said to have been intentionally left out, we find them to consist mostly of terms from the Greek, Arabic, alchemical and botanical authors, and from rude and outlandish tongues, which may be very well dispensed with. Indeed, when we behold what a vast number of hard and technical words is left, we think every reader may be glad to get rid of them.

ART. VIII. *Descriptive Poems*, by John D. M'Kinnon. *Containing Picturesque Views of the State of New-York. Foolscep* 8vo. pp. 79. New-York. T. & J. Swords. 1802.

IN a letter published some time ago in the New-York Monthly Magazine, the author of these Poems gave a striking and picturesque account of the country south of Lake Ontario, and particularly of the cataract of Niagara. From this specimen of description in prose, it might naturally be expected that the genius of Mr. M'Kinnon, when exerted in verse, would furnish a richer repast for the lovers of rural landscape. How far such expectations will be realized, the readers of the present volume will decide: for ourselves, we acknowledge that the perusal of Mr. M.'s poetry has by no means put us out of conceit with his prose.

The contents of the volume are, a "Description of the Hudson River," a "Description of the Mohawk River," "Description of the Scenery in the Vicinity of New-York in the Month of October," and a "Description of the City and its Amusements in the Winter."

From the first we select the following lines, descriptive of the Highlands and West-Point.

"Now meeting the pure breath of morn, and borne
Within the steep projecting Highlands ridge,
The prospect rises round. Gigantic, vast,
O'ershadowing mountains soar, invested thick
Their shaggy waists, and to their summits far
A wilderness unbounded to the eye,
Profuse and pathless, unsubdued by toil.
Diminutive beneath, the Hudson deep,
Coerc'd by rocks, and silent, penetrates
The solitudinous and woodland scene;
His former course disorder'd, winding through
Uncertain, struggling for a passage. Far
Within the lofty desert we behold
The fort,* and thundring cannon on its brow,
Rais'd on the western rocks, where trav'lers long
The base and vain design that had betray'd
Columbia shall relate. Here one while steep,
In cliffs, and perpendicular, the shore
Sublime, abrupt its craggy front exalts,
And blackens o'er the tide: then low at first,

* "West-Point."

And rising from the naked granite banks,
 A sunny length of wood, out-stretch'd from hill
 To hill, light undulating o'er the yoke
 Of distant mountains, swells into the skies."

We are somewhat at a loss what passage to cull from the next poem, "The Mohawk." The description of the Cahoes Falls is not sufficiently picturesque and interesting. Perhaps his general view of the country near the German Flats is most deserving of particular regard.

"And now the airy Flats we pass, their church,
 Litigious hall, and taverns, and approach
 The gloomy shade of dark continuous wood
 That runs high westward to the Mohawk's fount.
 Unbroken here the waste—half-settled here
 The towering trees on new-born fields recline—
 Disorder'd, hewn, the venerable stems
 And branching limbs surround their parent trunks,
 That in the blackening conflagration still
 Survive, and to the scythe of Time alone,
 That levels all things, yield; a sturdy few
 Yet standing, girdled by the fatal knife,
 In slow destruction waste, upon their sprays
 And airy summits quench'd the vital lymph;
 In wintry desolation group'd, they pine
 Midst summer's genial solstice. Thriving near,
 Their comrades flourish; tall, columnar *bass*,
 With fluted shafts aspiring; *oaks* that stretch
 Their vigorous arms; the *hemlock*, sombre-topt;
 The yellow *birch*, her silken boddice half
 Unlac'd, and *maple*, delicately seam'd,"

In the succeeding poem, his view of an Indian corn-field, in the time of harvest, alludes to a scene so familiar to every American eye, that our readers will readily decide whether or not the poet has taken an accurate survey of the reaping process.

"Investing half the prospect, from the wood
 And thorny brakes, with knotty rails fenc'd off,
 The corn-field stretches o'er the vale, and up
 The undulating hill's irriguous base:
 Luxuriant, spreading wide with ample leaves,
 It waves and rustles in th' inconstant wind.
 Sprung from the dog-star's blaze and mighty heat,
 The plants, long nourish'd in the black parterres,
 Mature for harvest stand, with yellow ears

Inwove with beads. The tufts first taken off,
And near the home-stall heap'd, in swampy yards,
By cloven feet impress'd, the labourers move
From row to row, and gather from the stems,
Shorn of their crests, the silk-envelop'd ears.
One stoops amongst the tawny blades, and strips
The pod; another, sable-fac'd and slow,
Bears on the loaded pannier to his teem
Of ruminating oxen near at hand,
And through the echoing shades the loaded wain
Drives creaking on its miry wheels; while swift
Before him fly the conscious thieves, their prey
Deserted for the sheltering wood, but yet
Reluctant, and intent on future spoil:
Loquacious black-birds in the sunny brake
Thick settling, and the squirrel, thro' the leaves,
Wing-footed, springing on the lofty stem."

In the last poem, "December," the author gives a lively picture of our streets after a fall of snow.

"Nor there unwelcome is the night that shrouds
The country wide with snow, while in the morn
The lively sound of bells proclaims the sleighs
And horses trampling on the powder'd soil.
All hasten to their cars; and scarce the sun
Eyes the wan earth askance, ere, glancing to
And fro, they pass, in rapid flight, a mix'd
And motley-featur'd throng. The merchant cool,
With calculating brow—the merry tars,
That, fiddling, cleave the wind, and strive in song
With Æolus—the beau, in shagg'd surtout,
Curbing, with mein erect, his fretful steeds—
And lily faces peeping from their muffs,
That shield their whiteness from the rosy gale.
Forth to the country's waste they fly, or coast
Along the river's livid shore, but soon
Glide back towards the lively streets, that, ere
The noontide splendour quits them, reappear
In ruddy footways drest, and pavements rough
With fractur'd stones silicious."

Having, in our opinion, done justice to Mr. M. in exhibiting some of his most successful passages, a less pleasing part of our duty leads us to take notice of some of the blemishes of his work. We may remark, in the first place, that his description of many subjects is so general and brief, that the

reader is hardly aware of the measure of his progress, or his exact situation during his passage up the Hudson and Mohawk. These poems are but slight sketches or general outlines, where few things are pourtray'd in such vivid and striking features as to captivate the attention, engage the fancy, or satisfy the curiosity. It is to be regretted that this description has not been interspersed with more flowers of sentiment, or enlivened by a few historical episodes. The account of the aborigines of the country near the Mohawk is the only attempt of the latter kind.

The author's verse is more distinguished for splendour of diction than melody of numbers. The lines are frequently prosaic, and the ear is often struck with forced and unusual expressions. The reader wanders through a profusion of flowery words, but as he finds but few objects distinctly delineated, he closes the volume, scarcely remembering through what region he has been conducted, or what objects have been presented to his eye.

We shall conclude our strictures with exhibiting a few instances of ill constructed lines, unmusical cadences, and obscure expressions. The following imperfect lines might easily be corrected by one who has a tolerable ear for musical structure and arrangement. Writers of blank verse are too apt to pass on, from line to line, regardless of the adjustment of pauses and the melody of verse.

"Esopus' plains in blue perspective grand;"
Recalling to the traveller's mind such noble scenes." (p. 11.)

"And dwellings windowless; till pausing where
The weary'd Hudson dropt his anchor, we repose." (p. 12.)

"Thrice happy change, by what mysterious power
Of Fancy's necromantic art dost thou impel." (p. 13.)

"Harmonious, tranquil, which thy genius, Claude,
Taught by the sober Fancies, had confest her own." (p. 21.)

"And, hailing in the lonely chace his devious mate,
With shoutings wild, beside Scoharie's brooks,
Or Canajohary's echoing cliffs." (p. 22.)

"Hate and dark design,
Tho' stifled, kindling in their vengeful hearts
Infuriate love of arms. Their origin,
And whence their wild fore-fathers stray'd,
No annals tell, whether inclining tow'rd
The peaceful ocean." (p. 25.)

"And gesture fiend-like, beat the war-dance: here,
By Vengeance nursed, they rais'd a flame." (p. 27.)

"With Peace and Love, more sweet than is the voice
Of Fame, when from Parnassus she proclaims,
In melodies that vibrate 'twixt heaven
And earth, her hero's actions. But, renew'd
Our journey, we pursue the mountain's stony edge." (p. 31.)

"Split by electric peals, until appeas'd,
At length, the *wrath chaotic*, drest." (p. 34.)

"And now the whole perspective opening
Thro' its extent, discovers a serene
And boundless day. Thro' every nerve,
Inspir'd with animation, in the pathless field
I stroll delighted." (p. 42.)

"Obnoxious to the winter's spray, their farm
Lies screen'd. Its tenements and dock." (p. 51.)

"Attemper'd by the chaste cerulean air,
The noon looks mild, and all the bay
Is calm." (p. 52.)

"O fav'rite city, much in opulence and strength
Grown eminent, since first upon the bay." (p. 53.)

"In fresh pursuit—directed these
By Speculation's nice discernment—those." (p. 63.)

The second of the two following lines is an instance of carelessness, as a simple inversion of the words would render it musical.

"Upon the silver orb of the full moon,
As she rides in her serenest zenith." (p. 78.)

The following may be cited as an obscure passage.

"A science [legislation] that on eagle wings
Descries a nation's multifarious wants
With sight expatiate, clear, that fain would scan
The strangely complicated creature man,
And rule his changeable, mysterious heart,
By slight and fleeting circumstances turn'd,
A seeming paradox; but constant still,
And true to polar Nature in each nice
Vibration, as the needle trembling o'er
The magnet." (p. 64.)

We regret that the amiable author of these poems had not applied to them the hand of correction before he consented to their publication. It would have saved us the disagreeable task of pointing out faults which might have been easily amended.

ART. IX. *Cases determined in the Superior Courts of Law and Equity of the State of North-Carolina.* By John Louis Taylor, one of the Judges of the said Courts. 8vo. pp. 360. Newbern. Martin & Ogden. 1802.

THE great importance of a well-settled system of law is felt and acknowledged in every country where justice is administered upon principles which have an equal and universal application; where the rights of all classes of the community are held in the same estimation, and no distinctions are known but those which spring from pre-eminent virtue and talents. Such being the condition of the people of America, they cannot be indifferent to any measure which is calculated to produce practical improvements in those plans of jurisprudence adopted by their respective governments, and with which is so closely entwined the preservation of their civil and political liberty.

The establishment of courts of competent jurisdictions; the arrangement of them in such a manner as, on the one hand, to facilitate the dispatch of business, and, on the other, to provide the necessary means of deliberate examination; and the appointment of Judges possessed of adequate learning and integrity, are objects which cannot too seriously occupy the attention of a people sincerely desirous of continuing free. In the preface to this work, we are informed that the judiciary system of North-Carolina has undergone many beneficial alterations, and that "a new and salutary impulse has been imparted to the general movements of justice." Much, however, remains still to be accomplished, before it can be pronounced equal to the great and valuable purposes of its institution, or before reports of proceedings under it can become either very interesting or instructive. For, says the reporter, "according to our present judicial constitution, the decisions of any one court cannot be considered as authoritative to the rest: persons who have presided at different times have seen the same question in different and even opposite lights; and the most learned counsel cannot pronounce, in relation to new

and intricate cases, what the opinion of the court will be." We are accordingly told that these *Cases* "are not to be considered as authorities; on the contrary, that they are given only as the evidence of the opinion of the Judges who made, or joined in the decisions." It will at once, therefore, be perceived, that the present volume can answer but in a limited degree, the purposes for which works of this nature are destined. We consult books of reports for the *evidence of the law*—for those standard principles which are to decide future controversies of a like kind, and govern those to which they bear an analogy. Where they do not effect these ends, although they are not entirely destitute of use, they materially fall short of their principal design.

The cases reported are, in general, such as result from the mere practice of their courts, or are founded on the peculiar manners or municipal regulations of the country; all which are so different from those of New-York, that little is to be collected from them that can be useful to the practising lawyer in this State. Independent of this consideration, a book which is professedly not authority in its own State, can scarcely be entitled to much weight in another. It is, however, due to the compiler to say, that if his labours are not as advantageous to others as they could wish, the fault should not be attributed to him: his duties have been discharged in a manner so satisfactory, as to increase our regret that the adjudications were not made under circumstances which would have given them greater efficacy.

Judge Taylor very candidly and forcibly states the defects of their present mode of doing business, and suggests a remedy by a new distribution of the judicial power. As his observations on the subject are sensible and pertinent, we shall close our remarks by transcribing them.

"Where questions of law are to be decided on the sudden, amidst the hurry of a trial, and when the examination of the witnesses demands the whole attention of the court, that the testimony may be stated with accuracy to the jury, the best informed may err, the most cautious may mistake. And as the business of a term of the Superior Court is fully adequate to the time, there is but little opportunity of hearing argument after the issues of fact are tried. It is believed that such a mode of doing business is calculated to create a spirit of litigation where it exists not, and to keep it alive where it prevails. If, on the contrary, questions of law, of sufficient importance, might be removed to a higher tribunal, at the pleasure of the party dissatisfied with the first decision, and

there solemnly argued before persons skilled in the jurisprudence of their country, a system would soon grow up, consonant with the spirit of our government, and conducive to private right, security, and confidence. Decisions so made, under circumstances favourable to the discovery of truth, would claim the respect of all other courts in the State, and ought to be considered as the law of the land until altered by the legislature. But implicit confidence cannot be placed in judgments which are pronounced without the essential aid of the arguments of learned counsel, who, by previously investigating a complicated case, are enabled to present, in a distinct view, the principles and authorities upon which the parties rely. The means of framing a right determination would be thus furnished to the court, without delay, and the suitors would receive the satisfactory assurance, that their claims and pretensions, upon which, perhaps, their most valuable interests depended, had not been decided without the fullest examination."

ART. X. *Elements of Useful Knowledge, Vol. i. Containing an Historical and Geographical Account of the United States. For the Use of Schools. By Noah Webster, jun.* 12mo. pp. 206. *Hartford. Hudson & Goodwin. 1802.*

THE design and nature of this performance are explained in the preface.

"This volume," says Mr. Webster, "is the beginning of a system which has been for many years in contemplation, but the execution of which has been heretofore delayed by other necessary employments. Notwithstanding the numerous improvements in the means of education, within the last twenty or thirty years, much remains to be done towards facilitating the acquisition of general knowledge and useful science. The elementary works of geography, biography, natural history, and other subjects proper for the use of schools, seem to be imperfect in the want of order and method in the distribution of the several parts, and destitute of the moral, philosophical and practical remarks, which are necessary to enliven a narrative of facts, and, by uniting the attractions of delight with the labour of study, to allure the minds of youth along the difficult road to knowledge. Nature, in all her works, proceeds according to established laws, and it is by following her order, distribution and arrangement, that the human mind is led to understand her laws, with their principles and connection. It is also by carefully observing the uses of the produc-

tions of nature, and the adaptation of every thing in creation to its particular purpose, that the mind is led to just views of final causes, and to such conceptions of the attributes of the divine author as to confirm a belief in his being and perfections.

“ But if our elementary treatises, compiled for schools, are deficient in method and in practical remarks, our whole system of instruction is still more defective in the number of sciences taught in ordinary schools and academies. Many of the most useful sciences and arts are not taught at all, or very imperfectly—nor have we books well calculated for the purpose.

“ The *system* here begun *contemplates* some improvement on the plan of general education hitherto adopted, and if public opinion should justify the attempt, it will be continued in a series of volumes under the same title. It is the intention of the author to include in these, the *elementary principles*, by which are meant, the *known truths* and *ascertained facts*, which belong to all the more useful sciences, and all branches of practical knowledge. In pursuance of this design, it is intended, as far as practicable, to separate the sciences, arts, and different branches of knowledge, arranging each under a distinct head, and in treating each, to follow, as far as may be convenient, the *order of time* and *of nature*.

“ The first volume begins with what is usual in geographical treatises, a general view of the solar system, of which this globe is a constituent part. It then explains the general structure of the globe, the materials which compose it, and the distribution of those materials upon the surface. Next follow the divisions of the surface, comprehending a general view of the land, water, mountains, rivers and lakes. In the geographical descriptions, a view of the *natural structure* of a continent precedes a consideration of its *artificial state*, arising from its settlement and improvement by men. As a knowledge of our own country is most interesting to our own citizens, a description of the American continent, and especially of that part which is comprehended within the limits of the United States, though not falling within the rule of chronological order, takes place of all other parts of this system, and forms the substance of the two first volumes. This description comprehends a view of the position and general structure of the continent; a summary history of its aboriginal inhabitants, their settlement, character and manners. To this succeeds a brief history of the discovery of America, and of the conquest and settlement of the several parts of it, by the Spaniards, French, English and Portuguese—a short account of the several grants, charters and settlement of the several

English colonies, and of the most material occurrences in their political, civil, ecclesiastical, and military affairs, from their first settlement to the formation of the present federal constitution. The present volume brings down this historical sketch to the important era of the revolution.

“ With a view to the utmost practicable degree of correctness, in regard to American affairs, the author has consulted the most authentic histories and documents which have hitherto been published; relying upon his own information only, in cases falling under his own observation. It has been his aim to preclude every statement or relation of facts not well authenticated, and opinions formed on slight evidence. When things are admitted as probable only, they are carefully distinguished from those which are known or understood to be facts.

“ In the manner of executing this work, it will be observed that great regard is had to the convenience of schools. It seems to be agreed that the catechetical is the form of writing best adapted to the understandings of children; but this is not essential, provided the passages which they are obliged to learn are not too long and complex. The work here begun is intended to be read by children in classes, or to be committed to memory. Those parts which are most proper to be learnt by heart are thrown into short passages; and the whole is so divided, that each pupil, in reading, will have a distinct portion. At the beginning of each passage is placed the subject of it, expressed in few words, like the title to a discourse. The pupil will read this as a title or text to the passage; and when he commits the passage to memory, the words in Italics will furnish the teacher with the question proper to be proposed. This method will probably answer all the purposes of question and answer; at the same time, accommodate readers in classes, and save many pages in a volume, which would otherwise be occupied with questions, and the repetitions that result from them.”

This attempt to enlarge the sphere of instruction in our common schools is worthy of public approbation and encouragement. The volume now published relates to subjects already, in some shape, taught in them. In those which are to succeed, we shall have a better opportunity of judging of the extent of Mr. W.'s plan, and of the manner of its execution.—To compress into the compass of a small volume all, or the principal facts relative to the geography and history of the United States, they must be related with great brevity.

The first section consists of astronomical definitions and facts, comprised in a few pages. Mr. W. gives Herschel but

two satellites: yet six have been discovered by that celebrated astronomer. He omits to mention also the new planet discovered by *Piazzi*, named *Ceres*, and another more recently by *Olbers*. The magnitude and distance of the planet *Herschel* are stated by astronomers; though Mr. W. regards them as unknown. Two additional satellites have also been given to Saturn by Dr. Herschel; so that planet is known to have seven.

The second and third sections exhibit a concise account of the surface of the globe, as divided into land and water; the mountains, rivers, lakes, &c. of America, and of the United States in particular.

The remaining portion of the volume contains a general history of the first peopling of America, its discovery and settlement; of the Indian wars, and the political and military events, to the peace of 1783; of paper money; piracy in the American seas; diseases and remarkable events; and of the controversies and dissensions which took place among the colonies.

Such general views are highly useful, and while they serve to excite the curiosity of young persons, may induce them to seek for more particular information on subjects with which every one ought to be acquainted.

The plan of Mr. W. is good, and the materials for his use are abundant and excellent. The selection and combination of them demands only the due exercise of that judgment and taste which we believe him to possess.

ART. XI. *Living Faith: A Sermon, preached before the Society for the Relief of the destitute Sick, on the Evening of Sabbath, the 1st of November, 1801, in Bristo-Street Meeting-House, Edinburgh. By John M. Mason, A.-M. Pastor of the Associate-Reformed Church in the City of New-York.* 8vo. pp. 36. New-York. Collins & Son. 1802.

THIS sermon was originally published in Edinburgh; but as the author is a clergyman of this city, who has been in Great-Britain for some months past, and as it has been reprinted here, it may be considered as properly coming within the province assigned to this review.

Of Mr. Mason's general character as a writer we have several times had occasion to speak. In most of his composi-

tions there are found spirit, force and eloquence, in an unusual degree. He displays a vigorous and ardent mind, and seldom fails to plead the cause in which he is engaged, in such a manner as to command a respectful hearing, even from those who may differ from him in opinion. These remarks apply to the present discourse. It will not detract at all from the credit of the writer, either as a divine or a scholar.

This sermon is founded on *Acts* xv. 9, compared with *Galatians* v. 6. *Purifying their hearts by faith—faith which worketh by love.*—From these passages Mr. M. discusses the nature and the effects of Christian faith; and on each branch of the subject is full, explicit, and instructive. While he states, with great clearness, and in a very serious manner, what he supposes to be truth, he guards, with equal care, against the errors into which he supposes men are apt to fall on this subject; and repels objections with ingenuity and effect.

The following is a specimen of the manner in which Mr. M. answers the charge of immoral tendency, which has been so frequently brought against the religion of Christ by its enemies.

“ The enemies of the gospel have invented various excuses for their infidelity. At one time, there is a defect of historical document: at another, they cannot surrender their reason to inexplicable mystery. Now, they are stumbled at a mission sanctioned by miracle: then, the proofs of revelation are too abstracted and metaphysical: and presently they discover, that no proof whatever can verify a revelation to a third person. But when they are driven from all these subterfuges: when the Christian apologist has demonstrated that it is not the want of evidence, but of honesty; that it is not an enlightened understanding, but a corrupted heart, which impels them to reject the religion of Jesus, they turn hardily round and impeach its moral influence! They will make it responsible for all the mischiefs and crimes; for all the sorrows, and convulsions, and ruins which have scourged the world since its first propagation.

“ Before such a charge can be substantiated, the structure of the human mind must be altered; the nature of things reversed; the doctrine of principle and motive abandoned forever. It is only for the forlorn hope of impiety to engage in an enterprise so mad and desperate. Say, can a religion which commands me to *love my neighbour as myself*, generate or foster malignant and murderous passions? Can a religion which assures me, that *all stars shall have their part in the lake which burneth*

with fire and brimstone, encourage a spirit of dissimulation and fraud? Can a religion which requires me to *possess my vessel in sanctification and honour*, indulge me in violating the laws of sexual purity? in breaking up the sanctuary of my neighbour's peace? in throwing upon the mercy of Scandal's clarion the fair fame of female virtue? Can a religion which forbids me to be *conformed to this world*, cherish that infuriate ambition which hurls desolation over the earth, and fertilizes her fields with the blood of men? Can a religion?—But I forbear—*From whence come wars and fightings among you? Come they not hence, even from your lusts?* those very lusts from which it is the province of faith to purify the heart? The infidel pleads for his unholy propensities, on the pretext that they are *innocent*, because they are *natural*. And when a thousand curses to himself and to society follow their indulgence, he charges the consequence upon a religion which enjoins their crucifixion, and which, to give them their career, he trampled under foot. But stop, vain man! Was it the religion of Jesus Christ which, on its first promulgation, *breathed out threatenings and slaughter? shut up the saints in prison? punished them oft in every synagogue? compelled them to blaspheme? and, being exceedingly mad against them, persecuted them even unto strange cities?* Was it the religion of Jesus Christ which, in its subsequent progress, illuminated the city of Rome with the conflagration of a thousand stakes, consuming, by the most excruciating of deaths, a thousand guiltless victims? Was it the religion of Jesus Christ which, at a later period, when the Tiber overflowed, or the Nile did not overflow; when the earth quaked, or the heavens withheld their rain; when famine or pestilence smote the nations, ordered its opposers to the lions? Was it in obedience to the religion of Jesus Christ, after the expulsion of pagan idolatry, that the *mother of harlots and abominations of the earth* became drunk with the blood of the saints and with the blood of the martyrs? Was it the religion of Jesus Christ which, after being rejected with marks of unexampled insult, suggested to the knights-errant of blasphemy, the project of regenerating the world by the power of atheistical philosophy? Was it this religion which taught them to blot out the great moral institute of society, the Sabbath of the Lord? to extinguish the best affections of the human heart, to break asunder the strongest ties of human life, and to subvert the basis of human relations, by exploding the marriage-covenant? This, which instigated them to offer up hecatombs of human sacrifices to every rising and every setting sun? to hew down,

* "Tacit. Annal. lib. xv. cap. 44."

† "Tertull. Apolog. cap. 40."

with equal indifference, the venerable matron and her hoary Lord, the vigorous youth, the blooming maid, the sportive boy, and the prattling babe? and while they were thus writing the history of their philosophical experiments in the blood of the dead and the tears of the living, to boast the victories of their virtue? But my soul sickens—Ah, no! *the wisdom which cometh from above*, that wisdom which the gospel teaches, *is first pure, then peaceable, gentle, and easy to be intreated; full of compassion and of good fruits; without partiality and without hypocrisy.* Such was its imposing aspect in the primitive ages. ‘Give me a man,’ said a celebrated father of the church, the eloquent Lactantius—‘give me a man passionate, slanderous, ungovernable; with a very few words of God I will render him as placid as a lamb. Give me a man greedy, avaricious, penurious; I will give him back to you liberal, and lavishing his gold with a munificent hand. Give me a man who shrinks from pain and death; and he shall presently contemn the stake, the gibbet, the wild beast. Give me one who is libidinous, an adulterer, a debauchee; and you shall see him sober, chaste, temperate. Give me one cruel and blood-thirsty; and that fury of his shall be converted into clemency itself. Give me one addicted to injustice, to folly, to crime; and he shall, without delay, become just, and prudent, and harmless.’*

It may be questioned whether this quotation from *Lactantius* is introduced with due qualification. That religion has a most benign and purifying effect on the hearts and lives of those who embrace it in sincerity, and habitually live under its power, is certain. It cannot be questioned by those who take notice of what passes around them. Nay, in every case in which religion dwells in the heart, it will bring forth fruits of righteousness in the practice. But is it true, as a general rule, that religion entirely changes the natural tempers of men; rendering, in all cases, the timid bold, the irritable meek, and the parsimonious liberal and munificent? We rather suppose the bible to teach that the sanctification of the best of men is imperfect in this life; that the remains of natural corruption, though they no longer maintain a predominating influence, still, in general, more or less, appear; and that the triumph of the gospel over the depravity of man will never be complete until he reach the abodes of endless purity and bliss.—If this be the case, perhaps such unqualified language as that quoted from the zealous father, is rather calculated to

* “Lact. de Falsa Sapientia, lib. iii. cap. 25.”

give erroneous than just conceptions of the influence and power of the gospel.

The conclusion of this discourse, in which Mr. M. makes an application of the subject to the charitable institution before which it was delivered, is unusually well executed. It is written with taste, spirit, and eloquence; and, we doubt not, made a deep impression on his audience.

Though we have not read this sermon with unmingled pleasure as critics; though the author sometimes adopts expressions which we suspect will hardly be thought sufficiently intelligible to all descriptions of hearers; and, in a few instances, has rendered the structure of his sentences too artificial to be smooth or pleasing; yet, on the whole, we have seldom perused a specimen of pulpit eloquence more agreeable and interesting.

ART. XII. *A Sermon, delivered before the New-York Missionary Society, at their Annual Meeting, April 6, 1802. By Samuel Miller, A. M. one of the Ministers of the Presbyterian Churches in the City of New-York. To which is added, the Annual Report of the Directors, and other Papers relating to American Missions. 8vo. pp. 81. New-York. T. & J. Swords. 1802.*

TO every judicious advocate of the missionary cause, three topics will most naturally be suggested—the duty to extend the gospel—its importance to the present and future condition of man—and those promises respecting its progress, which remove the discouragements, and animate the hope of christians. To the last of these topics has the attention of Mr. Miller been directed. Well aware of the principal discouragement to missionary undertakings, and tracing to its proper source a common propensity to anticipate the accomplishment of the predictions, he has found, in the words of the prophet, one of the strongest arguments to trust and patience under those gloomy occurrences which seem to delay or counteract the fulfilment of the divine promise—Habakkuk ii. 3. *For the vision is yet for an appointed time, but at the end it shall speak, and not lie: though it tarry, wait for it; because it will surely come, it will not tarry.*

In illustrating this passage, and applying it to the occasion of the meeting, Mr. M. considers it “as embracing, and as intended to inculcate, the following truths.”

" 1. God is acting agreeably to a plan, in which there is a *fixed time* for executing all the designs announced in prophecy.

" 2. In executing this plan, occurrences often arise which disappoint the expectations of the pious, and lead them to suppose that the fulfilment of the promise for which they look is delayed beyond the appointed period.

" 3. The punctual and full accomplishment of every divine prediction is, nevertheless, certain.

" 4. We ought, therefore, to wait for this happy issue without anxiety or fear; and to use every exertion, as *workers together with God*, for carrying his designs into effect, in his own way and time."

The truth of the first proposition is argued from the perfections of God, from the express declarations of his word, and some striking examples which it records of the fore-ordination of events.

The cause of that apparent delay which disappoints the expectations of the pious, is found in their partial knowledge of the whole plan which infinite wisdom is carrying on, and in their inattention to the general character of the divine dispensations, which might lead them to suppose, that the fulfilment of the predictions would, in most cases, proceed by slow degrees, with many successive steps of preparation, and in a manner bearing the appearance of delay. To show that this has actually been the case, a few remarkable instances in sacred and profane history are adduced.

The third proposition is well supported by appropriate remarks on the faithfulness of God, the constitution of the covenant of redemption, and the promises respecting Zion, which have already been accomplished.

The last proposition contains the explanation of the duty urged in the text.

From this view of the subject a number of useful inferences are deduced, and the conclusion is formed by particular addresses to the various descriptions of persons in the assembly.

This discourse abounds in just sentiments, supported by the authority of the sacred writings. Each branch of it is ably discussed. Many of the thoughts are presented in a striking, and most of them in an interesting and impressive manner. If, in some instances, the style wants energy, or indicates haste, still it is never flat, and although it may not always reach the elevation of the subject, it ever discovers what characterizes Mr. M.'s composition—a taste so cultivated by an acquaintance with the best writers, and so chastened by the correctness of his own conceptions, as rarely to violate the

established rules of criticism, or to offend the most refined reader.

This is an excellence which always discovers a good, if not a strong mind, and is never acquired but by habitual and unremitted attention to the rules of composition.

As a specimen of Mr. M.'s style, we shall select a short passage on the consistency of the divine procedure with an established plan.

"When we look on the course of human affairs, indeed, we perceive much apparent disorder, and many seeming deviations from a regular plan. We behold, on every side, continual confusion and change. We see fluctuating purposes, weak and abortive undertakings, and a mingled mass of vices and virtues, success and disappointment, joys and sorrows. We see empires rising and falling; forms of government built up and destroyed; and nations rushing together with lawless fury, as if bound by no tie, as if directed by no steady principle of action. Every thing seems committed to accident, or dictated by caprice. *The race is not to the swift, nor the battle to the strong, nor bread to the wise, nor riches to men of understanding, nor favour to men of skill, but time and chance happeneth to them all.** No man knoweth love or hatred by all that is before him in life.† But this confusion is only apparent. The whole system of Creation, of Providence, and of Redemption, was fixed in the counsels of God, *before the mountains were brought forth, or ever the earth and the world were formed.* Amidst the seeming disorder, therefore, which we witness, there is an infinitely wise Agent behind the scene, who 'rides in the whirlwind, and directs the storm,' and with a regularity which, though unperceived, is real and perfect, is conducting every thing in the best possible manner. Yes, it is a precious and consoling truth, that, amidst all the frivolities of human weakness, the conflicts of insatiable ambition, the struggles of diabolical malignity, and the jarrings of selfishness and passion, one great and noble purpose is ever in the view of Jehovah; is still carried on, with undeviating steps; and will be finally accomplished by him, whose prerogative it is to bring good out of evil, light out of darkness, order out of confusion, and to make every creature and action promote his glory."

Mr. M.'s eloquence is gentle and insinuating. These characters will sufficiently appear in his address to a description of men, who are too often, and, we believe, to their injury, railed at from the pulpit. The ignorance and vanity of most

* "Eccles. ix. 11."

† "Eccles. ix. 1."

of those who call themselves deists, might excite the contempt of sensible men; but contempt is an emotion which ought never to appear in the desk; for, even towards the most worthless, it cannot be cherished by him who feels, as he ought, the value of the soul, and the awful responsibility of his office. While too many of those who reject the scriptures are ignorant and vain, some, it will be confessed, may possess great attainments—talents which ought to be respected, and qualities which command esteem. So far as their conviction depend upon the preacher, he can expect to effect it only by a simple elucidation of sacred truth or sound reasoning—not by abuse. If he believe those to be miserable who reject the scriptures, compassion will best evince the sincerity of his belief, and prompt the most impressive manner of addressing them. How far Mr. M. has attained to what it is the design of these remarks to recommend, our readers will judge from the following extract.

“The truths which you have heard show the folly, impiety, and danger of those who ridicule our hopes, and attempt to oppose the progress of the gospel. Are there any in this assembly disposed to say, with the blasphemers of old, *Where is your God? where is the promise of his coming? for since the fathers fell asleep, all things continue as they were, from the beginning of the world.* Guilty and deluded men! *In a little while, He that shall come, will come, and will not tarry: He will come in the glory of his Father; He will come in flaming fire, taking vengeance on them that know not God, and that obey not the gospel of our Lord Jesus Christ.* But, fellow mortals! when we look forward to a period so joyful and glorious for believers, it damps our joy to remember, that, unless grace previously snatch you from the ranks of rebellion, and from the bonds of iniquity, it will be a dreadful day for you! *Oh! that our heads were waters, and our eyes fountains of tears, that we might weep over the destruction which every successive triumph of our beloved King will assuredly prepare for his enemies!*

“Do you entertain the mad hope of exterminating his religion, and erasing his name from the face of the earth? Read, I beseech you, the faithful page of history. Near eighteen centuries ago, a few obscure and unlearned men went forth and preached a crucified Saviour. The infidels of the day sneered, scoffed, blasphemed, predicted their downfall, and, no doubt, deliberately believed that all their hopes would speedily perish. But, did it prove to be so? Nothing was farther from the truth. While those enemies of the Redeemer mouldered in dust, the power of his cross rose and prevailed;

while the names of most of them rotted in oblivion, his honour shone with growing lustre: and while the memory of *Nero, Caligula, Julian, Celsus, Porphyry*, and a few more odious persecutors, is preserved only for general execration, the despised *Nazarene* reigns in the hearts and affections of millions, and will ultimately reign, with undivided and undisputed glory, *from the rising of the sun to the going down of the same.*

¶ Be wise, then, ye enemies of Zion's King; and be instructed, ye opposers of his cause! Though the fulfilment of his predictions may appear to *tarry*, let not *your hearts be fully set in you to do evil*; they will be realized much sooner than you will be prepared, in your present condition, to meet them. But—*why will ye die?* Listen, I entreat you, to another offer of mercy. The Master whom we serve is *full of grace*; his blood cleanseth from all sin; he is *mighty to save*; and those who return to him, penitent and believing, *he will in no wise cast out*. He waits to be gracious. Turn not away from the proffered blessing. It is the only hope of the guilty. Hear! O hear! that your souls may live."

ART. XIII. *A Sermon, delivered before the Massachusetts Missionary Society, at their Annual Meeting, May 25, 1802. By Samuel Spring, Pastor of the North Church, in Newburyport. The Annual Report, also, of the Trustees, and several interesting Things relative to Missions.* 8vo. pp. 56. Newburyport. Blunt. 1802.

FROM the number of the Missionary Societies established in the United States, and from the extent and vigour of their exertions, we cannot but hope that important advantages will result, both to the religious and civil interests of our country. At any rate, the experiment is likely soon to be fully made, whether missionary undertakings, which have for their object the conversion of the pagan natives of our country, may be considered as promising that usefulness which their friends and supporters have hitherto supposed. Though by no means sanguine, we cannot help entertaining a hope favourable to their success. Were our European ancestors, fifteen hundred years ago, more disposed to receive christianity than American savages at present? or were they more likely to be brought into the christian church? We shall not absolutely decide in the negative; but we incline to the opinion that such an answer might be safely given. It is true, the efforts already made by evangelical teachers, among the Ameri-

can Indians, have generally proved, in a great measure, if not entirely useless; but it is questionable whether any of those efforts have been judiciously devised or conducted for gaining their end. May the plans lately set in operation in different parts of our country, prove more auspicious and successful!

The discourse under review was delivered at the second annual meeting of the Massachusetts Missionary Society. On this occasion the preacher made choice of a text from Rom. xi. 25:—*Blindness in part is happened unto Israel until the fulness of the Gentiles be come in.*—From this passage he deduces the following proposition, as the subject of discourse:

It is God's purpose, in reclaiming the world, to make the conversion of the Gentiles the occasion of the restoration of the Jews.

In discussing this doctrine, Mr. Spring *first* elucidates the general truth conveyed by the proposition; *secondly*, points out the course of Divine Providence by which this gracious design may be supposed to be effected; and, *thirdly*, makes some appropriate inferences and reflections.

The subject chosen by Mr. S. was well adapted to the occasion; and his mode of treating it is serious, judicious and instructive. His zeal in the missionary cause is worthy of a faithful minister of the gospel; and the opinions which he delivers with respect to those means of prosecuting missions which promise most utility and success, will be pronounced, by every reader, just and enlightened.

The Annual Report of the Directors of the Missionary Society, subjoined to the sermon, is an interesting document. From this it appears, that they have had in their employment, during the last year, *five* missionaries, who all discharged the duties of their office with exemplary fortitude, diligence and zeal; and whose labours were attended with a very encouraging degree of success.—Some of the extracts from the journals of the missionaries, which the report contains, show the value of the services they have rendered, and the importance of continuing and supporting the institution by which they are employed.

ART. XIV. *A Discourse, delivered before the Boston Female Asylum, Friday, Sept. 25, 1801; being their first Anniversary. By Samuel Stillman, D. D. Pastor of the first Baptist Church in Boston. Preached and published at the Request of the Society. 8vo. pp. 18. Boston. Russel & Cutler. 1801.*

THE establishment of female charitable associations in the United States, is at once a monument to the honour of our fair countrywomen, and an æra in our social and moral history. The towns of Boston, New-York, Philadelphia and Baltimore, and, we believe, some other places, have, for several years, witnessed the institution, the progress, and the benign effects of such associations. We can only say, that while some affect to view these societies as ephemeral trifles, we can never cease to regard the wisdom which planned them, and the persevering benevolence which conducts and supports them, with the highest respect, and to anticipate an augmentation of human happiness by their means.

The *Boston Female Asylum* was instituted in the year 1800. From the sketch which Dr. Stillman gives of its origin, design and progress, there seems to be a prospect of its receiving ample support, and proving extensively useful.

Dr. S. devotes but a few sentences to the illustration of his text. After dispatching these, he undertakes to enumerate some of the principal charitable institutions by which the town of Boston is distinguished, and concludes by recommending the *Female Asylum* to the attention and munificence of his hearers. In the whole of the discourse piety and benevolence are conspicuous features. The worthy author pleads the best of causes, in a manner which, though not new or remarkably striking, was yet, we doubt not, adapted to the occasion, and useful in its impression.

ART. XV. *There is no Reason to be ashamed of the Gospel: A Sermon, preached at East-Hartford, in the State of Connecticut, December 23, 1801, at the Ordination of the Rev. Andrew Yates, as a Colleague Pastor with the Rev. Eliphalet Williams, D. D. By James Dana, D. D. Pastor of the first Congregational Church in New-Haven. 8vo. pp. 26. Hartford. Hudson & Goodwin. 1802.*

THIS is a serious, sensible, and well constructed discourse, founded on *Rom. i. 16*. It contains, however, nothing, in respect either to sentiment or composition, that demands our particular notice.

ART. XVI. *A Discourse, delivered before the Roxbury Charitable Society, at their Annual Meeting, Sept. 15, 1800. By William Emerson, Minister of the first Church in Boston.* 8vo. pp. 23. Boston. Hall. 1800.

IN a *charity sermon* novelty of matter will not be expected; nor is it easy to give novelty of appearance to the multitude of old and excellent arguments by which beneficence to our poor brethren is recommended.—Mr. Emerson has delivered those doctrines and arguments which naturally arise from his text (Eccles. xi. 1, 2), in favour of charity, with good sense, and with a considerable degree of taste.

The constitution of the society before which the sermon was delivered, is added, by way of appendix.

ART. XVII. *Piety and Arms: A Sermon, preached at the Request of the Ancient and Honourable Artillery Company, in Boston, June 3, 1799; the Anniversary of their Election of Officers.* By William Emerson. 8vo. pp. 23. Boston. Manning & Loring. 1799.

THIS discourse is founded on Psalm cxlix. 6. *Let the high praises of God be in their mouth, and a two-edged sword in their hand.* From this passage Mr. Emerson undertakes to show, on the one hand, the usefulness of national *piety*, as it tends to the promotion of personal virtue, social duty, public order, union, and prosperity; and, on the other, the necessity and duty of sometimes resorting to *arms*. He discusses each of these points well: and toward the close applies the subject to the state of our own country and of Europe. The sermon being delivered at a period when serious injuries from France were apprehended, Mr. E. warmly urges his hearers to a determined and vigorous repulsion of her attacks.

ART. XVIII. *An Oration, pronounced July 5th, 1802, at the Request of the Inhabitants of the Town of Boston, in Commemoration of the Anniversary of American Independence.* By the Rev. William Emerson. 8vo. pp. 23. Boston. Manning & Loring. 1802.

IN this performance the usual topics suggested by the occasion are touched upon, without any thing very remarkable in the manner in which they are examined and enforced. The author is an earnest advocate of the principles of the Ame-

rican revolution, and of those rights which it secured to our country. At the same time he inculcates the importance of attending to experience, rather than speculation; to the manners and habits of the people, rather than to the theories of political writers.

The language of Mr. E. is neat and perspicuous, and his eloquence easy and animated. The following may serve as a specimen.

"Americans called themselves free, because they were governed by laws originating in fixed principles, and not in the caprice of arbitrary will. They held, that the ruler was equally obliged to construct his laws in consonance with the spirit of the constitution, as were the people to obey them when enacted; and that a departure from duty on his part virtually absolved them from allegiance.

"Let not this be deemed a licentious doctrine. Who is the rebel against law and order, the legislator ordaining, or the citizen resisting, unconstitutional measures? It is the unprincipled minister, who artfully innovates on the custom of governing; the ambitious senator, whose self is his god; the faithless magistrate, who tramples on rights which he has sworn to protect: these are the men who, by perverting the purposes of government, destroy its foundations, bring back society into a state of war, and are answerable for its mischievous effects. Not those who defend, but those who attack, the liberties of mankind, are disturbers of the public peace; and not on you, my countrymen, but on thee, O Britain, who killedst thy people with the rod of oppression, be the guilt of all that blood which was spilt in the revolutionary war!

"Here, then you find the principles which produced the event we this day commemorate. They were the principles of common law and of eternal justice. They were the principles of men who sought not to subvert the government under which they lived, but to save it from degeneracy; not to create new rights, but to preserve inviolate such as they had ever possessed; rights of the same sort by which George III. then sat, and still sits, on the throne of England; the rights of prescription.

"Hence, through the progress of our revolution, these principles continued their operation. Armed in the uprightness of your cause, you disdained an appeal to those ferocious passions, which commonly desolate society in times of commotion. No man lost his life for resisting the general opinion. Instruction maintained its influence, law its terrors, and religion its divine and powerful authority. Property was se-

cure and character sacred; and the condition of the country was as remote from a savage democracy, as from a sullen despotism."

ART. XIX. *Carey's American Pocket Atlas; containing nineteen Maps; with a brief Description of each State. Second Edition, greatly improved and enlarged. 8vo. pp. 113. Philadelphia. Carey. 1801.*

MUCH useful geographical and miscellaneous information is compressed into this pocket volume, and with the maps it will be found a very convenient book for persons in general, and more particularly for those who are travelling through the United States. It is well printed, and the maps are neatly executed. *Tables* of the number of square miles, acres of land, and inhabitants in the several States, and the census of 1790, and of 1800, are subjoined.

ART. XX. *The Traveller's Directory, or Pocket Companion: showing the Course of the Main Road from Philadelphia to New-York, and from Philadelphia to Washington. With Descriptions of the Places through which it passes, and the Intersections of the Cross Roads. Illustrated with an Account of such remarkable Objects as are generally interesting to Travellers. From Actual Survey. By S. S. Moore and T. W. Jones. 8vo. pp. 52. and Maps of the Roads in twenty-three Parts. Philadelphia. Carey. 1802.*

THE design and contents of this volume are fully expressed in the title-page. The work is handsomely, and, we believe, correctly executed. Every traveller on these great roads will find it an useful and instructive companion. The plan of this itinerary is so judicious that we hope the authors may find it for their interest to extend it to other parts of the United States.

ART. XXI. *An Oration on the Nature and Effects of the Art of Printing, delivered in Franklin, July 5, 1802, before the Boston Franklin Association. By William Burdick, Vice-President of the Society. 8vo. pp. 28. Boston. Munroe & Francis. 1802.*

THIS author expatiates, *con amore*, on the effects of his favourite art; but, sensible as we may be of its wonder-working powers, and its beneficent influence on the happiness

of mankind, we cannot accompany this son of the type in all his flights of panegyric. When he represents the art of printing as "pointing out the true and only God and Saviour; as lighting us beyond the tomb, and directing our souls to heaven and immortality:" when he asserts that, "without this art our ideas of taste in architecture had extended no further than to the muddy and uncouth cell of the Laplander, or the filthy wigwam of the Indian," &c. &c. we discover more enthusiasm than judgment, more warmth of feeling than knowledge of the history of mankind.

Though many sensible reflections are made by Mr. B. they are disfigured by a style of rhapsody and bombast.

ART. XXII. *An Address, delivered before the Franklin Typographical Association of New-York, and a Select Company, on the 5th July, 1802, in Commemoration of the 27th Anniversary of American Independence, and of the third of the Association. By Thomas Ringwood. 8vo. pp. 22. New-York. Southwick & Crooker, 1802.*

THE rapid improvements made within these few years in the art of printing in this country, must be observed with pleasure by all the lovers of literature, and the admirers of correct and elegant typography.

The writer of the present address has contented himself with a more humble and beaten track than the one we have last noticed. Though we cannot commend this performance, we are not disposed to censure it, especially as the orator appears in a garb modest and unassuming.

We are pleased to learn that, besides the improvement of the art of printing, and the furtherance of the business of the trade, a primary object of the association is to afford relief to such members as, by accident or misfortune of any kind, may be reduced to indigence and distress.

ART. XXIII. *Hints towards promoting the Health and Cleanliness of the City of New-York. 8vo. pp. 16. New-York. T. & J. Swords. 1802.*

THE author of these hints, we are informed, is Mr. Sabatier.—Whether the fever, which has for several years past appeared in this city, be of foreign or domestic origin, Mr. S. justly thinks, that habits of personal and local cleanli-

ness will either prevent or greatly diminish the effects of this afflictive disease.

Water and *Lime* he regards as the two great agents in the destruction of impurity and noxious effluvia. The objects to which the attention of the police of the city ought to be directed, are, 1. Common sewers. 2. Kennels in the streets. 3. Drains above ground from houses. 4. Drains below ground from houses. 5. Vaults. 6. Docks. 7. Lodging-houses. 8. Burying-grounds. 9. Cleaning the streets. 10. Watering the streets. 11. Paving the streets.

Mr. S. thinks *sewers* might be built in New-York with greater ease and advantage than in almost any other city. These drains, if *circular*, would, as the distance from river to river is short, never choak up.

On the plans of sewers and drains, there are exhibited, in a plate, many pertinent remarks.

His observations on *vaults* and *lodging-houses* are so judicious and striking, that, for the sake of giving them further circulation, we shall extract them.

"The vaults of privies ought to be constructed of the best materials; and the bricks, if bricks are made use of, should be sufficiently hard and well made to resist the passage of the soil as well at bottom as the sides; the walls should be covered with the best terrace work, and by that means made perfectly tight. But a composition of boiled tar and charcoal, finely pulverized, will be found, for durability, superior to any other covering. The vaults, if there is room to extend them sideways, need not sink more than six feet below the surface of the ground. It is of importance to arch them completely over, except where the seats are placed, in order to confine the effluvia from the building. There should be two air funnels in opposite places to admit and let out the air. When vaults are emptied, the soil should be mixed up, and afterwards covered, with coal-ashes or lime, which will almost entirely prevent the effluvia. This should be done by persons who understand the business, who have covered carts, and other necessary conveniences provided, and are licensed for the purpose. The soil should be conveyed out of the city to a distant and retired spot. The detestable and injurious practice of throwing night-soil into the docks, and the use of tubs, unknown any where except in New-York, should be abolished under much more severe penalties than exist at present.

"It is a very false prejudice to suppose that the springs will be injured by sinking vaults. Every good bricklayer knows, or ought to know, how to make them secure; and, if any difficulty should in this respect arise, the master workmen in this

branch of trade should be put under license, and be sworn to execute such works as may be thought worthy of legal regulation. It is not uncommon for the laws to dictate to a man how he shall build his house. Great evils require extraordinary remedies, and it must be recollected that we are devising means to rid the community of a distemper little less infectious than the plague. A vault, well built, will not become peculiarly offensive, even though, as in London, it is not emptied more than once in eight or ten years."

"*Lodging Houses.*—Here, probably, is deposited the seat of the disorder. For more than twenty years the town of Manchester, in England, had been greatly afflicted with a contagious fever, which seemed to baffle the utmost skill of the faculty; at length, a few years ago, an inquiry was set on foot, and a report, made by Dr. Ferriar, on the subject, showed that it existed, almost solely, in those lodging houses where the poorest people resided; that many of the lodgings were in cellars, which had no ventilation, were seldom cleaned, and were very crowded: that it often happened, that people coming fresh out of the country, were at night put into beds from whence others who had died of the fever had been buried the same day. The remedies which were recommended were carried into execution, and proved efficacious. I shall here follow the same, with some additions, and have a sincere belief the like good consequences will ensue in New-York, if rigidly attended to; for I believe no doubt remains in the mind of every unprejudiced person, that the yellow fever is more likely to lie concealed in such places than in others.

"The first thing to be done is to oblige every person letting lodgings to take out a licence. It will be best to make the rule general, in order to avoid invidious distinctions.

"The next is to appoint a visiting committee *for this special purpose*, who shall report all delinquents of the regulations, and note such occasional observations as may occur. This requires only an extension of the 16th section of the present law.

"This committee should see the following rules put in execution:

"1. There should be but a certain limited number of beds in any room, and every bed should be allowed such a space as will tend to keep the air from becoming unwholesome by too quick a respiration.

"2. The rooms should have their floors well washed and scrubbed with soap or ley once a week; the walls and ceilings white-washed twice a year.

"3. There should be no lodging rooms in cellars.

"4. There should be some efficacious prevention of tubs in privies, by obliging every householder to have such a vault on

his premises as is deemed to be of the best construction. A matter of such essential consequence ought not to be left to the judgment or caprice of any individual.

"5. The floors should be sound and tight, that if liquids are spilled, dirt and wet together may not be collected underneath, and occasion ill smells.

"6. Every means of ventilation ought, at least, to be recommended, and, if necessary, should be enforced. When two rooms are contiguous, it is convenient to have a window between them, in order that a thorough draught may be had in hot weather; but it should be an object of police to promote the making of sashes to let down at top, as well as lift up at bottom, for all heated air has a tendency to rise, and is lest pure at the top of the room. Ventilated at top, it is sure to be as pure at bottom as circumstances will admit; but although every person is sensible of this property in nature, how very few sashes, except in the dwellings of rich people, are so constructed, and this on account of the expense of the lines, pullies, weights, and carpenter's work; all which are unnecessary, for two springs to each sash (one on each side) if well made, will be found to be simple, cheap, equally useful, and much more neat, as they are placed completely out of sight. The stiffness of the spring should be proportioned to the weight of the sash."

Mr. S. recommends square pieces of granite, which abounds in New-England and in the vicinity of New-York, for pavements, in preference to cobble-stones now used.—We are happy to observe that the corporation of this city, with a laudable zeal, are already engaged in carrying into effect many of the hints here suggested for promoting the health, convenience and beauty of this flourishing city.

ART. XXIV. *A Discourse, delivered at the University of North-Carolina, at the Commencement in July, 1802; concluding with an Address to the Senior Class, who were Candidates for the Degree of Bachelor of Arts. By the Rev. Joseph Caldwell, A.M. Professor of Mathematics, 12mo. pp. 50. Raleigh (N.C.) Gales. 1802.*

THE subject of this discourse is taken from Micah vi. 8.—*He hath showed thee, O man, what is good: And what doth the Lord require of thee, but to do justly, to love mercy, and to walk humbly with thy God.*

In his introductory remarks, Mr. Caldwell considers what is the greatest good of men—a question which has engaged the attention of philosophers and moralists in all ages. The

answer to this inquiry he finds in the words of his text, the practice of the duties of virtue and religion. He then proceeds to examine, separately, what is *justice*, *mercy*, and *humility*. On each of these topics he makes many sensible and judicious reflections.

This discourse is well adapted to the occasion on which it was delivered. The concluding address to the *Senior Class* displays the concern of a religious and benevolent mind for the future welfare of ingenuous youth, just adventuring on the turbulent ocean of active life. His advice is couched in terms mild, pertinent and persuasive.

ART. XXV. *A plain and concise Grammar of the English Language; containing large Exercises of Parsing and incorrect English.* By William Woodbridge, A.M. 18mo. pp. 84. Middletown (Conn.) Dunning. 1800.

THIS grammar is in the form of question and answer. The rules are expressed in concise terms, and many sentences are analyzed by way of exercise and illustration. It is evidently designed for the youngest class of learners, and will by no means supercede the necessity of resorting to other and more copious treatises.

The grammar of Mr. Lindley Murray, which has passed through several editions in England and the United States, appears to us to be better adapted to the purpose of teaching the English language than any other that has preceded it; and the *abridgment* is a judicious and useful introduction to the larger work. Both of them, with the *exercises*, seem admirably calculated for the use of the different classes in our schools, and to enable learners to acquire an accurate and competent knowledge of the structure and use of the English language.

This publication of Mr. Woodbridge falls very far short of the *abridgment* of Mr. Murray, both in plan and execution. Of elementary works for schools, it is of importance that the best should be selected. It is by a comparison of different publications on the same subject with each other, rather than with any ideal standard, that the most satisfactory judgment can be formed of the merits of each. By this mode of deciding on the volume before us, we are compelled to reject its claims, in favour of others which we more highly approve.

ART. XXVI. *A Paraphrase on eight Chapters of the Prophet Isaiah; wherein it is attempted to express the Sense of the Prophet in proper English Style.* 8vo. pp. 41. Worcester. Thomas. 1795.

ART. XXVII. *A Paraphrase on four Chapters of the Prophet Isaiah; in which it is attempted to express the Sense of the Prophet in proper English Style. By the Author of the Paraphrase on eight Chapters of Isaiah (lately published).* 8vo. pp. 23. Northampton. Butler. 1802.

THE author of this publication has not thought proper to accompany it with his name; and we know not to whom we are obliged for the attempt to illustrate a very important part of scripture. He has not even given a hint in his preface concerning the nature or extent of his design. We are left to collect every thing from the performance itself.

The best judges of eloquence have pronounced, that the sacred writings present us with the noblest models of simple impressive sublimity any where to be found; and though we are far from maintaining that our common translation of the scriptures is a perfect one, yet it may well be doubted whether any English version, in all respects equal to it, has hitherto been given to the public.—We are by no means opposed, however, to new attempts; they are often useful; and, perhaps, no parts of the sacred volume more admit of improved translations, and new paraphrases, than the prophetic books. The prophecy of Isaiah, after all the learned labours of *Vitringa*, *Lowth*, and several others, still presents abundant employment for the keenest critic, and the most learned interpreter.

We recollect but one performance which, in its plan, resembles the present. We refer to Mr. Gilpin's *Exposition of the New Testament*;* in which the author attempts to explain the sacred text, by expressing what he supposes to be its meaning in his own words, and with nearly as much brevity as in the original. Though our paraphrast differs somewhat in his plan from Mr. Gilpin, yet it is not improbable that he took the outline from that writer.

Of the nature of this publication, and the degree of success with which it is executed, the reader will be able to judge, by comparing the following passage, in the common translation, with the paraphrase here attempted.

* Two vols. 8vo. London. 1793.

"Awake; awake: put on thy strength, O Zion; put on thy beautiful garment, O Jerusalem, the holy city: for henceforth there shall no more come into thee the uncircumcised or unclean.

"Shake thyself from the dust; arise, and sit down, O Jerusalem: loose thyself from the bands of thy neck, O captive daughter of Zion.

"For thus saith the Lord, Ye have sold yourselves for nought; and ye shall be redeemed without money.

"For thus saith the Lord God, My people went down aforetime into Egypt to sojourn there; and the Assyrian oppressed them without cause.

"Now, therefore, what have I here, saith the Lord, that my people is taken away for nought? they that rule over them make them to howl, saith the Lord; and my name continually every day is blasphemed.

"Therefore my people shall know my name: therefore they shall know in that day that I am he that doth speak; behold it is I.

"How beautiful upon the mountains are the feet of him that bringeth good tidings, that publisheth peace; that bringeth good tidings of good, that publisheth salvation, that saith unto Zion, Thy God reigneth!

"Thy watchmen shall lift up the voice; with the voice together shall they sing: for they shall see eye to eye, when the Lord shall bring again Zion.

"Break forth into joy, sing together, ye waste places of Jerusalem: for the Lord hath comforted his people, he hath redeemed Jerusalem.

"The Lord hath made bare his holy arm in the eyes of all the nations; and all the ends of the earth shall see the salvation of our God.

"Depart ye, depart ye; go ye out from thence, touch no unclean thing; go ye out of the midst of her; be ye clean that bear the vessels of the Lord.

"For ye shall not go out with haste, nor go by flight: for the Lord will go before you, and the God of Israel will be your rere-ward."

Let us now see in what manner our author has paraphrased this elevated passage.

"Awake, O Zion, resume thy strength, and arise from the ground. O Jerusalem, my holy city, array thyself in thy beautiful robes. The polluted heathen, who have cast thee down to the earth, shall enter thy gates no more. Shake the adhering dust from thy garments. Arise, O Jerusalem; take thy throne among the nations. O daughter of Zion, long in captivity and exile, now resume thy freedom. Loose the cords,

which have fastened to thy yielding neck the galling yoke of the gentiles.

“For thus saith the Lord, ‘by your sins ye sold yourselves into captivity and exile, for nothing; now shall ye be redeemed without ransom. I remember the sufferings of my people. Formerly they went into Egypt; there were they holden in bondage; afterwards were led captive to Babylon, and there most cruelly oppressed. What should induce me now to suffer them again to be abandoned, to captivity and exile, without cause, while their haughty tyrants compel them to utter the cries of distress, and my holy name suffers daily reproaches, as if they were thus abandoned to suffering, through the want of my faithfulness or power? Therefore will I cause my people to know and acknowledge my glorious name; for in that day, when Zion shall be restored, they shall know the truth of the words which I now speak, and that I, their God, have spoken them.’

“O how beautiful the sight! the messengers, with nimble feet, are passing the mountains of Judah! They bring the welcome news of Jerusalem’s salvation and peace! announcing to Zion, that her God hath erected his kingdom, and begun to display his power, in redemption of his people.

“Thy watchmen, O Zion, shall behold the returning captives. They shall see them face to face; they shall raise their voices together, and join in songs of praise.

“O, ye desolate places around Jerusalem! burst forth into songs of Joy. Now shall ye be inhabited again. The Lord hath restored his captive people, and rescued Jerusalem from bondage. He hath displayed his faithful and mighty arm, before all the nations. The remotest regions of the earth, with astonishment shall see what salvation the Lord hath wrought for his people!

“For thus, through the earth, are his sovereign orders proclaimed, ‘Depart, O my people: march from the Gentile cities; let no pollution adhere to your garments; cleanse yourselves, as Priests and Levites, who bear the holy vessels of their God. Go not forth in haste; nor fly from a pursuing foe. The Lord will conduct your march. The God of Israel will protect you in the front, and guard you in the rear.’”

To each of the pamphlets is prefixed an *explanation of terms and phrases used by the prophet*, and which are considered necessary to be understood before entering on the perusal of the paraphrase.

We have seldom seen a piece of printing more incorrectly executed than the latter of these pamphlets.

ART. XXVIII. *America's Deliverance and Duty: A Sermon, preached at the Baptist Church in Charleston, South-Carolina, on the 4th July, 1802, before the State Society of the Cincinnati, the American Revolution Society, &c. &c. By Richard Furman, D. D. Pastor of the Baptist Church in Charleston, and a Member of the Revolution Society. 8vo. pp. 22. Charleston. Young. 1802.*

THE portion of scripture which Dr. Furman selected as the foundation of this discourse, is Exodus xiii. 3. *Remember this day, in which ye came out of Egypt, &c.* After a good introduction, he undertakes to show,

1. "That there is great reason to believe that the American Revolution was effected by the special agency of God."

2. "What duties and obligations are incumbent on our citizens, in consequence of his kind interposition."

The truth of the proposition, that the American Revolution was effected by the special agency of God, is argued from the justice of our cause—from the manner in which our citizens entered upon and supported the contest—from the evident interpositions of Providence in favour of the revolution—from the happy termination of the war, and the consequences which followed it—and from the probable destination of this country in the scheme of Divine Providence.—In discussing these several articles of illustration, Dr. F. treads frequently on delicate ground, but generally acquits himself in a guarded and judicious manner.

Under the second division of his discourse, the author expresses a belief, that a due regard to religion—a spirit of union and love to our country, a strict adherence to the constitution—guarding against prejudices and partialities with respect to foreign nations—duly respecting the persons who are constitutionally invested with authority—avoiding the artifices of demagogues, and the fury of party spirit—disseminating useful knowledge—and cherishing a rational jealousy for liberty—are duties evidently arising from the political blessings bestowed upon us, and would, if generally practised, secure our best national interests.

Dr. F. writes like a man of good understanding, of respectable information, and of fervent piety. Though inaccurate expressions now and then occur, probably arising from haste; yet the discourse is certainly entitled to a considerable share of commendation.

Several *Hymns*, composed for the occasion, are added to the discourse. They are a very decent specimen of devotional poetry.

ART. XXIX. *A Sermon, delivered before his Excellency Caleb Strong, Esq. Governor, the Honourable the Council, Senate, and House of Representatives of the Commonwealth of Massachusetts, May 26, 1802; being the Day of General Election. By Thomas Baldwin, A. M. Minister of the second Baptist Church in Boston. Third Edition. 8vo. pp. 32. New-York. Nicholls. 1802.*

THIS discourse was originally published in Boston, by order of the House of Representatives of Massachusetts; but having proved more than usually acceptable to the public, a second edition, it seems, was called for; and the demand still increasing, a third impression in this city was thought proper. These circumstances alone afford strong presumption in favour of Mr. B.'s discourse.

The text is chosen from 1 Peter ii. 16. *As free, and not using your liberty for a cloak of maliciousness; but as the servants of God.*—From this passage the author considers himself as naturally led to make the following inquiries:

“When may a people be said to be free? What are the means best calculated to preserve their freedom, and promote their happiness and prosperity? And in what respects they are in danger from the abuse of their liberty?”

These several questions are discussed with much good sense; and though Mr. Baldwin is necessarily led, in the course of this discussion, to speak of political points which are much controverted, and even to advert to those topics of American policy which have so much divided and agitated our citizens; yet he guards against every thing that approaches to party virulence; and expresses himself, on every point of a political nature which he touches, with great dignity and mildness.

On the whole, we consider this discourse as belonging to the superior order of sermons; and though the sentiments are not new, nor the style remarkably polished, yet both are sufficiently interesting to give much pleasure to the intelligent and candid reader.

To the sermon is subjoined the Governor's speech at the meeting of the General Court, which Mr. B. was called to address,

ART. XXX. *A Sermon, preached at the General Election, at Hartford, in Connecticut, May 13, 1802. By Joseph Strong, A. M. Pastor of a Church in Norwich.* 8vo. pp. 26. Hartford. Hudson & Goodwin. 1802.

THIS discourse is founded on Jeremiah vi. 16. *Thus saith the Lord, Stand ye in the ways and see, and ask for the old paths, where is the good way, and walk therein, and ye shall find rest for your souls.*—From these words the author proposes to institute the following inquiries; viz. 1. “What are those paths, pursued by our fathers, which, in a more distinguishable sense, constitute the good way:” and, 2. “What is the nature of that rest to be secured by walking in these ways.”

With respect to the first inquiry, Mr. Strong supposes that their fathers set an excellent example in their belief of revelation—their attachment to internal and practical religion—their industry to give existence and energy to moral sentiment—their spirit of social deference and subordination—their considering a good christian character an essential qualification for office—their aversion to innovate upon the established government—and their ardent love to their country.

With regard to the second topic of inquiry, Mr. S. believes that temporal prosperity and happiness are principally intended; and that, by following the good paths above stated, every national interest, whether natural or moral, literary or political, would be essentially advanced.

The discourse closes with a brief reference to the occasion on which it was delivered, and the duties, both of officers of government and of private citizens, which the occasion naturally suggested.

We are pleased with the good sense, piety and mildness which this discourse displays. The arrangement is good; the diction, for the most part, chaste and simple; and the composition, generally, such as is calculated to please and instruct.

ART. XXXI. *An Inaugural Dissertation on the Origin and Propagation of the Yellow Fever. Submitted to the Public Examination of the Faculty of Physic under the Authority of the Trustees of Columbia College, in the State of New-York: the Right Rev. Benjamin Moore, D. D. President: for the Degree of Doctor of Physic, on the 4th of May, 1802. By Joseph Bayley.* 8vo. pp. 28. New-York, T. & J. Swords. 1802.

- ART. XXXII. *An Inaugural Dissertation on the Use of the Digitalis Purpurea, or Purple Foxglove, in the Cure of Diseases.* Submitted to the Public Examination of the Faculty of Physic under the Authority of the Trustees of Columbia College, in the State of New-York: the Right Rev. Benjamin Moore, D. D. President: for the Degree of Doctor of Physic, on the 4th of May, 1802. By Jacob V. Brower, A. M. of New-York. 8vo. pp. 24. New-York. T. & J. Swords. 1802.
- ART. XXXIII. *An Investigation of the Properties of the Liriodendron Tulipifera, or Poplar-Tree.* By Patrick Kerr Rogers, formerly of Ireland; now of Philadelphia; Honorary Member of the Philadelphia Medical and Chemical Societies. 8vo. pp. 67. Philadelphia. Johnson. 1802.
- ART. XXXIV. *An Essay on the Hydrocephalic State of Fever.* By Thomas Rowan, of Salem, New-Jersey, Honorary Member of the Philadelphia Medical and Chemical Societies. 8vo. pp. 35. Philadelphia. M'Laughlin. 1802.
- ART. XXXV. *Observations on the Hepatic State of Fever.* By George Logan, of Charleston, South-Carolina, Honorary Member of the Philadelphia Medical and Chemical Societies. 8vo. pp. 34. Philadelphia. M'Laughlin. 1802.
- ART. XXXVI. *An Inaugural Dissertation on the Prunus Virginiana, commonly known in the United States by the Name of Wild Cherry-Tree.* Submitted to the Examination of the Rev. John Ewing, S. T. P. Provost, the Trustees and Medical Faculty of the University of Pennsylvania, on the twenty-seventh day of May, 1802, for the Degree of Doctor of Medicine. By Charles Morris, of Virginia, Honorary Member of the Philadelphia Medical Society. 8vo. pp. 45. Philadelphia. Geyer. 1802.
- ART. XXXVII. *An Essay on the Disease commonly called Diabetes.* By William Washington, of Alexandria, Virginia, Honorary Member of the Philadelphia Medical and Chemical Societies. 8vo. pp. 36. Philadelphia. Humphreys. 1802.
- ART. XXXVIII. *An Inaugural Dissertation on the Vitality of the Blood.* Submitted to the Examination of the Rev. John Ewing, S. T. P. Provost, the Trustees and Medical Faculty of the University of Pennsylvania, for the Degree of Doctor of Medicine. By John Martin, of Delaware. 8vo. pp. 36. Philadelphia. Carr. 1802.

ART. XXXIX. *An Essay on the Lithontriptic Virtues of the Gastric Liquor.* By John Syng Dorsey, of Philadelphia, Honorary Member of the Philadelphia Medical and Chemical Societies. 8vo. pp. 30. Philadelphia. Maxwell. 1802.

ART. XL. *An Inaugural Dissertation on the Efficacy of certain External Applications.* By Henry Jackson, of Savannah, Georgia, Honorary Member of the Philadelphia Medical and Chemical Societies. 8vo. pp. 42. Philadelphia. Maxwell. 1802.

ART. XLI. *An Inaugural Dissertation on the Principle of Animation.* Submitted to the Examination of the Rev. John Ewing, S. T. P. Provost, the Trustees and Medical Faculty of the University of Pennsylvania, on the 27th of May, 1802, for the Degree of Doctor of Medicine. By Joseph Macrery, of Delaware. 8vo. pp. 24. Wilmington. Bonsal & Niles. 1802.

AS publications of this kind are made not of choice, but from necessity, and as they are usually the productions of young men, the conductors of literary journals have generally thought it not proper to subject them to the ordeal of criticism, and have therefore omitted to take notice of them. Perhaps a middle course is preferable. While the impropriety of surveying them with the eye of a critic is obvious, yet the public ought to be informed of the existence of such publications.

We shall not undertake to give a character of each of these dissertations. It may be said, in general, that they are honourable specimens of collegiate industry and learning.—The circumstance of our American colleges permitting their medical graduates to write and publish their inaugural *Theses* in the *English* language, has been reprobated by the literati in Europe. We shall not undertake to decide on the wisdom of this permission; but every friend of classic literature will lament the growing inclination of public instructors to dispense with that acquaintance with the learned languages which was, a few years ago, thought necessary to complete a liberal education. We do not expect to make converts; but we cannot forbear expressing our regret that the course of learning is evidently, in this respect, retrograde.

We have given all the dissertations which were published, this year, by the graduates of Columbia College; but of those published in Philadelphia, the above list only contains a part. We are sorry it is not more complete. We have collected all that came within our reach.

LITERARY JOURNAL.

INTELLIGENCE.

Improvement in the calcining of Lime-stone.

PPETER LOSSING, of Beekman-Town, in Dutchess County, has obtained a patent (dated August, 1800) for an improved method of converting lime-stone to quick-lime. The principal advantages of his method are these: 1. The fire-place which receives the fuel, instead of being left open, as in the common kilns, is closed after the wood is put in. 2. The heat is thus prevented from escaping through the aperture to incommode the workmen. 3. By preventing its dissipation in this manner, the heat is made to ascend through the crude lime-stone piled in the kiln, and to expend its force wholly upon the material to be calcined. 4. A saving is made of a considerable proportion of the wood usually employed in calcining lime-stone; amounting to one half of the quantity commonly consumed by the old lime-burners in the State of New-York. 5. The air, instead of being admitted through an opening in front of the kiln, as in the old mode, is made to ascend through an opening in the ash-hole, formed in an angular direction, coming in at the mouth, and thence through gratings to the fuel above. 6. The quick-lime, so prepared by a rapid and intense heat, is better adapted for building, and preferable for the use of bricklayers and masons. 7. A kiln, containing 1500 bushels of slaked lime, may be completely burned in forty-eight hours; whereas, in the old mode, at least double that time is required. 8. In this process so little coal or ashes fall into the pit through the grating, that, in the consumption of ten cords of wood, not more than four or five bushels of ashes are formed; the rest or residuary mass of the wood, in this intense heat, being dissipated, decomposed, and carried off in vapour. 9. A common kiln may be fitted to work upon this plan for the expense of a dollar, exclusive of the doors, and with not more than three hours labour.

Persons who wish to adopt the above mode of calcining lime-stone, are requested to obtain particular directions from the patentee; for a want of a strict adherence to the principles on which it is designed to operate may bring this useful discovery into disrepute.

Mr. Lossing has improved the art of burning lime in many

respects; and his observations tend to show that quick-lime is something very different from mere calcareous earth deprived of its carbonic acid and water. From the quantity of alkaline salt collected at the top of his kiln after cooling, there is reason to believe the convertibility of lime into pot-ash.

Robotham's Air-Pump Ventilator.

Richard Robotham, of Hudson (N. Y.), has obtained a patent for the invention of an air-pump ventilator, for the ventilating of ships, mines, prisons, hospitals, &c. It is a single bellows, fitted upon the top of a tube of wood, or a trunk made of plank, which, in a ship, stands in the lower part of the hold, by the keelson, and runs up through the lower deck. The bellows is fixed on the top of this trunk, with a valve in the usual place, at the inlet. The outlet of the bellows is made of wood, with a square angle, which turns upwards, and a valve in the upright part, that shuts down, in such manner that the bellows fills from the bottom and discharges at the top. If the bellows discharges one barrel at a time, the insides of the trunks must be six inches square; it will be then sufficient for a vessel of three hundred tons; but if they are four or five times this size, the machine may be worked by the labour of one man: or, about one square inch of enlargement may be made in the trunks to each gallon in the bellows; then it will fill and discharge about twenty times in a minute. The bellows may be made in various shapes and sizes at pleasure. This improvement consists altogether in filling the bellows at, or from the bottom, and discharging the contents at the top, above the upper deck, or out of a port-hole.

Dr. Albers's American Annals.

The learned Dr. Albers, of Bremen, has lately transmitted to Dr. Miller, the first volume of a periodical work, published by himself, entitled, "*Amerikanische Annalen der Arzneykunste, Naturgeschichte, Chemie und Physik*,"—"American Annals of Medicine, Natural History, Chemistry and Physics." In this work a minute and satisfactory account is given of the progress and present state of science in the United States. American publications are examined in a candid and liberal manner, and the literary and scientific exertions of our countrymen are exhibited in a respectable light. Besides his attention to other publications, the author presents an analysis of all the more important papers contained in the "Transactions of the American Philosophical Society," and the "Medical Repository."

Medal of Lavoisier.

The cabinet of New-York coins and medals, belonging to the Rev. Dr. Kunze, has lately been enriched by a medal of that great, though unfortunate man, the chemist Lavoisier. The coining was executed by Ph. Gengembre, at Paris, and is very much in the style of Watt and Boulton's best pieces. This striking token of respect to the memory of Lavoisier was presented by our minister, Robert R. Livingston, Esq.

Munificence of the King of Naples.

By information from Italy, we learn that the petition of Dr. Mitchell, to his Majesty the King of the two Sicilies, has been granted. The request was, that his Majesty Ferdinand the Fourth would grant the petitioner a copy of that superb work on the antiquities of Herculaneum and Pompeia, which has been published under the patronage of that sovereign, and at his expense. The petition having been forwarded to Palermo before the king returned to Naples, was immediately complied with, and the books ordered to be forwarded to New-York. It is to the polite attention and influence of Messrs. Rosier & Roulet, merchants in this city, that this attempt to obtain a copy of that curious, valuable, and classical work, for the benefit of the American literati, is indebted for its success. Through their friendship, and the bounty of his Sicilian Majesty, we may soon expect that this rare and voluminous publication will arrive, and be added to our literary stock.

Further Proof of the Anti-Pestilential Effects of Alkalies.

The beneficial operation of lime has been amply confirmed by the experience of another season. The Board of Health have been uncommonly vigilant and attentive to the duties of their respective stations. The gentlemen who compose that body have attended steadily to the two-fold source of autumnal sickness; that is, to the local origin of it on ship-board, and to the domestic production of it in other human habitations and their appurtenances on shore. The wholesome plans of the Health-Officer have been ably seconded by the Common Council of the city.

Not only has lime been thrown, in large quantities, into vaults and sinks, through all parts of the town; but the abodes of hundreds of the poorer citizens have been painted internally with lime. The effects of this operation were almost incredibly comfortable. Unhealthy vapours were taken out of circulation and neutralized, and the atmosphere immediately thereafter became healthy, sweet and invigorating. Much good has been done by it, and by its faithful auxiliaries, ley and soap, in destroying infection. Some of

the unfortunate tenants of foul and pestilential tenements have been so sensible of the comfortable effects of alkalies, that, after the application of them, they have expressed themselves thus: "We feel as if transported to a purer and better state of existence."

Specimens of Native French Porcelain Earths.

The Mineralogical Society of New-York has been furnished with three samples of those peculiar materials which are employed to make the fine porcelain of France. They were obtained at the manufactory of China-ware at Sevre. No. 1 is a beautiful white substance, of such remarkable natural qualities, that the best ware can be formed of it without any addition or admixture. It is found in Limosin.—No. 2 is a sort of very fine and pure clay, fit for making an inferior kind of ware.—No. 3 is a species of spar for glazing the porcelain. It is white, hard, and of a very fine grain, resembling, more than any thing, the nicest pieces of snowy quartz.

These specimens not only serve to gratify rational curiosity, but have a further use. By being preserved as standard samples, they will aid the judgment in deciding upon the qualities of any of the *native earths of the United States* that may be offered for examination.

Cultivation of the Vine on the Ohio.

John James Faur, and his associates, emigrants from the *Pays de Vaud*, Switzerland, are engaged in cultivating vines in the new State north-west of the Ohio River. An act was passed in their favour during the last session of Congress. It is with pleasure that we learn that success is likely to crown their attempt. It is remarkable that the cuttings from the vines of Burgundy and the Cape of Good-Hope thrive the best; while the naturalized vines of New-York and the Atlantic States promise but little.

Introduction of the Spanish Sheep into the United States.

It is with great pleasure we learn that our patriotic fellow-citizen, Col. David Humphreys, late Minister of the United States to the Court of Portugal, has lately imported, from Spain, a large number of the true *Merinos* breed of sheep. Col. Humphreys now resides at New-Haven, in Connecticut.—The following observations, extracted from his letter to Dr. A. Dexter, Second Vice-President of the Massachusetts Agricultural Society, are of importance, as they tend to remove a common prejudice, that the Spanish sheep will soon degenerate in this country, though it is well known that the experiment has never yet been fairly tried here.

“The importance of meliorating the breed of Sheep in our country, particularly in the article of wool, had been early and deeply impressed on my mind.—In addition to the gradual process of improvement, by bestowing more care and attention on our native flocks, in feeding them well and crossing the blood (obviously suggested by reason and experience) two modes occurred for hastening and ensuring the attainment of that interesting object. The first, to introduce and propagate an entirely new race, if a more perfect one could be obtained; the second, to meliorate our flock, by producing a mixed progeny from our ordinary ewes by rams of a better breed.

“But before there could be sufficiently good reason for justifying the trouble and expense of transporting an adequate number, it was the part of wisdom to ascertain, first, whether the breed be superior in intrinsic value to those which already existed? And, in that case, secondly, whether the race contemplated to be introduced is likely, when propagated there, to retain all those qualities which constituted the original superiority of value? And here I founded my opinion in the affirmative of both questions, and applied to a particular kind of Spanish sheep, on the facts stated, in some instances, by respectable individuals, and, in others, by official reports.

“In *Spain*, two distinct species of sheep have for ages existed, the one named MERINOS, famous for their short and fine wool, peculiarly fit for carding; the other denominated CHURROS, distinguished for their long and coarse wool, more suitable for combing. The former are so precious as to be sought with eagerness by all who wish to meliorate the staple for the woollen manufactory in any country of *Europe*; while the latter, though much larger in size, are in so little estimation as never to be procured for exportation. My statements and remarks will be confined to the MERINOS. The height of the male is about the same as that of the ordinary breed in this country. The head appears rather bigger and straighter—the ears are very small—the eyes remarkably bright—the horns curved in a spiral turn—the neck short—the chest broad—the members more compact and thick than those of our former breed of sheep; and the carcase is thought to have smaller bones, and to be more rounded in the hinder part. The body, face and legs, are covered with a delicate fleece, which grows amazingly thick, without any mixture of coarser locks or hairs. This fleece is remarked to be much more impregnated than that of any other breed, with an oily substance, apparently exuded in perspiration. This animal is perfectly gentle, but quick, firm, and regular in all his movements. The female is considered generally as having the more characteristics of the pure blood, in proportion as she approximates

to this description—yet the ewes are commonly destitute of horns.

“ A few well attested facts will serve to show the value of this race. None of the superfine cloths made in *England, France, and Holland* can be fabricated without the mixture of a certain portion of this wool.—The price is more than twice as high per pound as it is for ordinary kinds. I shall mention, in another place, the increased weight of the fleece, when this breed has been transferred from *Spain* to another country, upon the testimony of those concerned in their management.—That the flesh is not less succulent or well-flavoured than the best English or American mutton, I have had frequent opportunities to decide for myself. It is understood that the *Merinos* are more easily maintained and fattened than the taller and larger breed, inso-much that there are persons acquainted with both breeds who calculate that 200 of these small boned and short legged sheep may be kept in tolerable good condition, where 20 of the other would suffer for want.

“ To establish a strong presumption in favour of the second point, viz. that the race then contemplated to be introduced into the United States was likely to preserve all those qualities which constituted the original superiority of value, I needed only refer to the propagation of a breed from the same stock, with fleeces augmented in quantity, and undiminished in fineness, in *Great-Britain, France, Holland, Switzerland, Germany, Denmark, and Sweden*. In the most northern climate to which they have been carried, they have supported the cold perfectly well, and even without suffering any injury from having been in some instances buried for a time under the snow. At the national farm of Rambouillet, in *France*, they are reported, on good authority, to have not only resisted the unfavourable influence of a situation naturally too low and moist, but to have preserved their wool in all its original fineness, and to have increased the weight to an astonishing degree.

“ It is a fact, confirmed by experience, beyond contradiction, that the quality of the wool does not depend on the quality of the pastures in *Spain*, because the same pastures have maintained, from time immemorial, two different breeds, which have never assimilated, one remarkable for the shortness and fineness, the other for the length and coarseness of the wool. It is moreover equally well proved, that the quality does not depend on the journies which the greater part of the *Merinos* make annually, because there are other flocks of the same race which remain perpetually in the same district, and whose fleeces are of the same consistency precisely as the others. The flocks that do travel, or do not travel, which are nourished with plentiful food, and taken good care of, by excluding the deformed, sick

and weak from becoming breeders, are preserved in all the purity of the original stock—while those in either predicament, migrating or resident, which are subjected to feel the effects of scarcity and negligence, invariably degenerate.

“The vigilance of the shepherds, in remaining day and night with their charge, in reserving the best formed and finest wooled only for breeding, and in knowing and attending to each individual of their flocks, has doubtless contributed much to preserve them from degenerating down to the present day.

“This breed, like most of all others, thrives best in uplands and short pastures; but it is reputed to be so singularly hardy, as to endure rain, snow and cold as well as any northern race, and to support itself in parched southern climates, by feeding on weeds and vegetables which most others would not taste. Without entering into the detail of enriching the land, on which they graze or are folded, by their manure, especially where a rotation of crops is systematically pursued, I should not omit to mention, it has been asserted, that a moderate sized farm, for example, a hundred acres, skilfully manured, may be made to maintain one hundred sheep, and moreover, to produce as much in crops as it would have done had it been employed only in cultivation, and not charged with their nourishment.

“That rams have been let for the season in *England*, for from two hundred to one thousand guineas each, is a fact sufficiently known to those who are acquainted with the history of agricultural proceedings in that country, and it demonstrates conclusively the wonderful passion that prevails for bettering the breed. The successful experiments in *France*, on the same subject, have been announced in a manner which demands credit. At *Rambouillet*, a farm originally appropriated for making improvements by the ancient government, which is represented not to be a very good position, on account of its humidity, a pure Spanish flock has been maintained for many years, by the attention and care of the superintendants, not only in a perfectly healthy, but gradually improving condition, in such sort, that the quality of the wool is as fine as that of the best Merinos actually in *Spain*, while the quantity is considerable more than doubled. Where large flocks are kept in the last mentioned country, the sheep do not produce, upon an average, more than from two to three pounds. The rams at *Rambouillet* yield from ten to twelve, and the ewes from five to six each. From this stock, many small flocks, both of the pure and mixed breeds, have descended.

“Several intelligent authors in Europe, who have treated of the most speedy and efficacious modes of improving wool, have stated, that, where the smallness of the original stock of *Merinos* prevents so rapid a propagation of the pure race as could

be wished, a mixed breed may be produced by Spanish rams, and well chosen ewes of the country, whose descendants in the fourth or fifth generation, will yield fleeces nearly or quite as fine as the first quality of those which are produced in *Spain*."

From the *Moniteur*, forwarded to Dr. Mitchill, by the Hon. Robert R. Livingston, our minister at Paris, we extract the following remarks made by M. Charles Pictet, while on a visit to the national farm at *Rambouillet*, about ten leagues from Paris. They will serve to confirm the opinion of Colonel Humphreys on the practicability of preserving the Spanish breed of sheep from degenerating in a foreign climate.

"The sheep-cot, which is the most interesting object at *Rambouillet*, is detached from the farm-house only a few hundred paces. It was formerly a breeding place for pheasants. It is a building consisting of four large galleries, connected at their extremities. The racks and mangers are on the two sides. The sheep-cot is floored and well ventilated. Litter is very plentiful. The place is neither cold or hot, nor is any bad smell perceptible on going into it.

"It is only six days since the lambs began to be yeaned, and there are already sixty of them. It is at *Rambouillet* where one must go to view the true Spanish race of sheep. These fine creatures have bodies of an extraordinary beauty. The pains which are always taken to prevent their receiving the ram before the third year, gives them a chance to have a full growth and developement of parts which are in common cases prevented by too early or premature gestations. They are remarkably strong, square, and low upon the legs. Those which give suck, or which are almost ready to bring forth, have their udders distended and their teats hanging almost like little cows. They afford abundance of milk, though they live upon dry fodder all the winter. The second cuttings of clover and lucerne are their only forage.

"Each sheep, besides his two pounds of lucerne, eats about half a pound of oats with (*la balle*) of corn. In the evening some straw is put into the rack to amuse them during the night, but this is not calculated on as any part of their nourishment. In winter they are foddered four times a day; and the flock is driven about and to walk for exercise during an hour or two, provided the rain does not prevent.

"The sheep are divided into four distinct flocks, to wit, the ewes, the rams of two years old and upwards, the male lambs, and the female lambs and wethers. This last flock is not at *Rambouillet*. The whole of these animals amounts almost to six hundred.

"I was singularly struck with the beauty of the yearling rams. I think their mean weight was about eighty pounds,

and they continue growing until they are three years old. The custom now is, to leave on their first fleeces until they are sheared. About a dozen lambs are sheared at the end of the year, by way of experiment. This has always succeeded, though it has been found, that lambs well sheared the first year suffered from the long rains of the summer, or the first frosts of the autumn. Mr. Bourgeois, the superintendant of the national farm, has confirmed, by his own observations, what I myself have remarked, that it is of great importance to the beauty of the ram or sheep, that his growth should not be interrupted by any accident during the first year. Another reason for waiting to the second year before shearing is, that the ewes are worth less than the wool they yield, and the weight of the first fleece at the age of eighteen months is equal to that of the two shearings in the old way.

“ Out of about sixty rams, I observed a dozen of excellent shape. As to the fineness of wool, there is but a small difference among them; for none but superfines are kept in the establishment. The horns are not cut as they used to be, unless they are too close to hurt their heads. It has been found that purchasers prefer rams with their horns entire. These rams are singularly mild and tractable. They collect around those who enter their fold, and never pretend to butt. They may be caught and examined without the least difficulty, but they attack one another and fight with fury. Sometimes there are twenty battles at once in their enclosure. M. Delorme, the first shepherd at Rambouillet, said, at such times, instead of attempting to part them, he found it necessary to get out of the way, and take care of himself. The ewes are more shy and hard to catch, when you wish to examine them. The keeper called our attention to those which had not been sheared for thirty months, and are under the experiment for ascertaining what will be the condition of the fleece at the end of three years. The wool is seven inches long, and sticks on as firmly as if it was only one year old. These two sheep do not suffer from the weight of their fleeces; but neither of them is very thick.” There are also a number of remarks on feeding, stalling, and keeping this breed of sheep; and of the management of another flock lately introduced from Perpignan in Spain.

Mr. Livingston, who is President of the Agricultural Society of New-York, has sent over some of this valuable breed of sheep to enrich his native country.

New-York Protestant Episcopal Society.

A society has been instituted in this city, to consist of the members of the Protestant Episcopal Church, and is styled the “ Protestant Episcopal Society for promoting Religion and

"Learning in the State of New-York." It is under the direction of twenty-one trustees, appointed, in the first instance, by the Corporation of Trinity Church. These have the power of electing honorary members. The trustees meet monthly, and have the management of the funds and property of the society, and appoint a *treasurer*, *secretary* and *assistants*, if necessary.

The following are the objects of this institution: "the adopting of measures to ensure a sufficient number and succession of pious and learned Ministers of the Gospel attached to the excellent doctrines and discipline of the Protestant Episcopal Church; to afford assistance to such young men as are of good character and competent abilities, but in circumstances which do not admit of prosecuting the study of Divinity without aid; to encourage those who may distinguish themselves by extraordinary attainments; to receive all donations for pious purposes, and to superintend the application of them; gradually to provide funds for the procuring of a Theological Library, for the establishment of Schools, and of one or more Fellowships in Columbia College: in a word, to pursue a system of measures whereby the situation of the Clergy may be rendered respectable, the Church obtain a permanent support, and learning and piety be generally diffused throughout the State."

The trustees have an annual meeting, on the first Monday of September, when vacancies in their body are filled up, and such elections are valid when approved of by the Corporation of Trinity Church. The trustees and society are to have a general meeting on the first Tuesday of October in each year, when a *sermon* is to be preached by such person as the Bishop shall appoint.

The Bishop of the State is *ex officio* a member of the society, and presides at the general meetings.

The following are the trustees appointed by the Corporation of Trinity Church:

Right Rev. Bishop Moore,	<i>ex officio</i> , President.
Rev. Dr. Beach,	Jacob Le Roy,
Rev. Dr. Bowden,	Francis B. Winthrop,
Rev. Mr. Hobart,	Matthew Clarkson,
Rev. Mr. Jones,	Herman Le Roy,
John Charlton,	William Jauncey,
Peter Kemble,	Rev. Mr. Pilmore,
Robert Watts,	Rev. Mr. Harris,
John Onderdonk,	William M. Seton,
Frederick De Peyster,	Martin Hoffman,
Richard Harrison,	John Jones.

Frederick De Peyster, Treasurer.

Rev. John H. Hobart, Secretary.

The "Catechism of the Protestant Episcopal Church in the United States of America," has been published at the expense of a fund arising from the charitable contributions of the members of the Protestant Episcopal Church in the State of New-York.

Commencement at Columbia College.

The Annual Commencement at Columbia College, in the city of New-York, was held on Wednesday, the 4th day of August. The degree of Bachelor of Arts was conferred on twenty candidates. Four gentlemen, alumni of the College, were admitted to the degree of Master of Arts. The honorary degree of Master of Arts was conferred on the Rev. WILLIAM DUKE, of Maryland. The degree of Doctor of Divinity was conferred on the Rev. JAMES KEMP, of Maryland.

Commencement at Harvard University.

On Wednesday, the 25th day of August, the Annual Commencement of Harvard University was held at Cambridge, (Mass.) The degree of Bachelor of Arts was conferred on fifty-eight candidates. Twenty-eight gentlemen, alumni of the College, were admitted to the degree of Master of Arts. JOHN M'KESSON, Esq. M. A. of Dickenson College, (Penn.) and BENJAMIN SHURTLIFF, M. A. of Rhode-Island College, were admitted *ad eundem*. The honorary degree of Master of Arts was conferred on Mr. NATHANIEL BOWDITCH, of Salem. Messrs. JAMES JACKSON, ROBERT THAXTER, BENJAMIN SHURTLIFF, and JOHN CLARK, were admitted to the degree of Bachelor of Physic; SAMUEL ADAMS, M. B. received the degree of Doctor of Physic. The degree of Doctor of Divinity was conferred on the Rev. THOMAS FLEMMING, the Rev. WILLIAM BENNET, of Scotland, and the Rev. JOSIAH WHITNEY, of Brooklyn, Connecticut.

Commencement at Dartmouth College.

On the 25th day of August, the Commencement at this College was held at Dartmouth, (N. H.) The degree of Bachelor of Arts was conferred on twenty-two candidates. Sixteen gentlemen were admitted to the degree of Master of Arts. The degree of M. B. was conferred on DANIEL OSGOOD, CYRUS PERKINS, and J. HUBBARD SPARHAWK. The honorary degree of Doctor of Laws was conferred on the Hon. RUFUS KING, our Minister at the Court of London, and on the Hon. JOHN DAVIS, Judge of the District Court in Massachusetts.

Commencement at Yale College.

The Commencement at this College was held the 8th day of September, at New-Haven, (Conn.) when the degree of

Bachelor of Arts was conferred on sixty-one candidates, and eleven were admitted to the degree of Master of Arts. The degree of Doctor of Divinity was conferred on the Rev. SAMUEL HOPKINS, of Hadley, (Mass.) that of Doctor of Laws, on the Hon. RICHARD LAW, Esq. of New-London, and on Mr. ELIPHALET PEARSON HANCOCK, Professor of the Oriental Languages, and of the English Language, in Harvard College.

Commencement at Princeton College.

The annual Commencement at Princeton College, (N. J.) was held on Wednesday, the 29th September, when the degree of Bachelor of Arts was conferred on twenty-six candidates. Ten gentlemen, alumni of the College, were admitted to the degree of Master of Arts. The degree of Doctor of Divinity was conferred on the Rev. HEZEKIAH RIPLEY, of Connecticut, the Rev. ROBERT BALFOUR, of Glasgow, in Scotland, the Rev. MATTHIAS BURNET, of Norwalk, Connecticut, and the Rev. JOHN KIRKLAND, of Boston. The degree of Doctor of Laws was conferred on the Hon. JOHN MARSHALL, Chief Justice of the United States, and on Mr. ELIPHALET PEARSON, Professor of Oriental Languages and Belles Letters in the University of Cambridge. The degree of Master of Arts was conferred on the Rev. ALEXANDER McLEOD, A. B. of Union College, and Pastor of the Reformed Presbyterian Congregation in New-York; the Rev. JOSIAH HINTON, of Oxford, in Great-Britain; ANDREW S. HUNTER, Esq. Attorney at Law, New-Jersey; WILLIAM FARRAND, A. B. of Yale College, and Principal of the Academy in Princeton.

The Rev. EDWARD D. GRIFFIN, A. M. of Yale College, was admitted ad eundem in this College; and JOHN P. CROSBY, A. B. of Columbia College, was admitted ad eundem in this College.

Literary History of North-Carolina.

A gentleman who has had some opportunities for knowing the state of Literature and Science in this State, and who has leisure that he would willingly devote to labours calculated to benefit the community of which he is a member, has it in contemplation to publish an "Historical View of the Scientific and Literary Institutions of North-Carolina."

Two things have prompted this design: Firstly, to promote the interests of Literature and Science generally; and, secondly, to collect some detached fragments that may be useful materials for a future history of the State.

In order to render a publication of this kind complete, it becomes necessary that he should ask information on the subject of those who are enabled, by their connection with the

several institutions, to give full and correct details; and he has perfect reliance on their disposition to give such information as it will be remotely calculated to serve the cause in which they must feel a particular interest.

I. Of the University and the several Academies in the State, he requests information of the following particulars:

1. The persons who first proposed and promoted the establishment.
2. The time and terms of incorporation, (if incorporated.)
3. The number and names of the trustees, and the manner of their appointment.
4. Amount of funds, and how derived.
5. Legislative aid.
6. Donations, with the names of donors.
7. The police of the schools.
8. The professorships, with the names of the professors and tutors.
9. Number of students at different periods in each class of education, with the numbers of those sent from beyond the limits of the State, and the places from which they are sent.
10. Names and residence of those who have taken degrees in the University.
11. Names of those who by the visitors or trustees were publicly awarded the distinction of good scholarship, designating the branches of education in which they were distinguished.
12. The manner and amount of compensation of professors and tutors.
13. Prices of tuition.
14. Prices of board and other items of necessary expense connected therewith.
15. The manner in which students are lodged, &c. &c.
16. The societies or debating clubs of the students. Rules and regulations; awards or distinctions, and subjects of discussions.
17. Library of the institution.
18. Philosophical apparatus.
19. Museum.
20. Description of the buildings and their particular site.
21. Description of the town or village in which they are situate, and of the adjacent country; as also an account of the inhabitants and state of society.
22. Proceedings of the legislature relative to any institution.
23. Acts and proceedings of the trustees.

II. Of Societies instituted for the promotion and diffusion of useful Knowledge.

1. The time of their formation,

2. The persons who first associated and promoted the establishment.
3. Objects of formation.
4. Method of instituting and encouraging inquiries.
5. Premiums.
6. Funds and how derived.
7. Legislative aid.
8. Donations and names of donors.
9. Laws and regulations.
10. Concise history of their progress.

III. *Library Companies.*

1. When established and by whom.
2. Number of Members.
3. Number of books belonging to the library.
4. Number of shares and their prices.
5. Funds.
6. Donations and names of donors.
7. Rules and regulations.
8. Officers.

To this work there is intended to be an appendix, containing

1. Concise sketches of the lives and characters of some deceased citizens of the State, who were distinguished for their talents or public services; and,
2. A list of books and pamphlets written in this State, with a very brief review of some of the most remarkable.

From this enumeration of the particulars of the information desired, will be perceived the plan and spirit of the intended publication; and the proposed author requests of his obliging correspondents not to limit their communications to the particulars of this list, if they should think proper to transcend it; but to include every thing which, connected with this design, they shall deem worthy of remark.

The advantages of a publication of this kind are many and obvious. Literature and science will find new advocates by having their repositories opened to public inspection: Public spirit will be promoted by preserving in memory the exertions and liberality of those who have been the friends and patrons of seminaries, which train up our youth to become useful citizens: Youth will have a strong inducement to perseverance in their studies when a public tribute of praise awaits superior acquirements: Parents and guardians, in fixing the destination of those for whose education they have to provide, will be enabled to judge of the comparative advantages of the several institutions with regard to instruction, health, expense and society: The historian will find the materials for an important portion of his history provided to his hands; and all will be

enabled to gratify a laudable curiosity on a subject in which every one must feel some degree of interest.

The biographical department is not the least important. It is due to deceased merit, and it is useful to the living to portray with a faithful pencil the characters of those who have acquired honourable distinction.

The list of publications, with a passing notice of their subject and merit, will be a kind of literary chronicle of the times—a species of intellectual history—a scale by which to measure the state and ascertain the employment of the public mind at different periods.

Through the assistance of his expected correspondents, the writer hopes, in the course of the present year, to be enabled to offer his work to the public: and when he makes the avowal (which he now does) that the profits of the publication are not to be applied to his own benefit or that of any individual, but will be given to a literary institution, he hopes an additional inducement will be offered to furnishing materials and to encouraging subscriptions for the work, whenever proposals shall be made to the public.

All communications are desired to be made as early as possible, addressed (post paid) to W. S. A. care of Hodge & Boylan, printers, Raleigh.

New Publications, and Works preparing for the Press.

JAMES HUMPHREYS, of Philadelphia, has just published, in one volume 12mo. "An Epitome of Chemistry," by William Henry. This little volume is judiciously compiled, and will be found a very useful companion to the student of chemistry.

G. F. Hopkins, of this city, has just published, in one volume 8vo. "Barrow's Travels into the Interior of Southern Africa." Illustrated with a correct and elegant map.

John Morgan, of Philadelphia, and T. & J. Swords, of this city, have in the press, "Natural Theology; or the Evidence of the Existence and Attributes of the Deity, collected from the Appearances of Nature." By William Paley, D. D. author of Moral Philosophy, Evidences of Christianity, &c. &c.

The copy-right of the "Life of Washington," now preparing for publication, has been purchased by Mr. Wayne, of Philadelphia. It will be put to press the ensuing year, and will be comprised in four or five volumes 8vo.—Mr. Wayne has issued proposals for subscription. The price of the work

will be three dollars a volume—one volume to be paid for in advance until the work is completed.—It is to be executed in an elegant manner, on vellum paper.

J. Humphreys has proposed to publish, in a neat pocket volume, "A Survey of the Strength and Opulence of Great-Britain," &c. By the Rev. Dr. Clark, Secretary for the Library, &c. to his Royal Highness the Prince of Wales. With observations by Dean Tucker, and David Hume, Esq. in a correspondence with Lord Kaimes. Now first published.

A new work on arithmetic, by Thomas Wills, entitled, "The Teacher's Assistant and Pupil's Guide," Part I. is proposed to be published by G. & R. Waite, of this city. It is designed as a system of mercantile arithmetic, and particularly adapted to the commerce of America.

CORRESPONDENCE.

To the Editors of the American Review and Literary Journal.

GENTLEMEN,

IT is the policy, if not the duty of a writer, after submitting his writings to *public* consideration, to acquiesce in the *public* opinion concerning their merit. But it is equally the duty of men who undertake the task of criticism, to be very cautious not to mislead the public opinion by mistating facts, or by unfounded suggestions.*

In your review of my "Miscellaneous Papers" (vol. ii. p. 193), you allege that, in my preface, I have charged the federalists with "inconsistency, error and *folly*." I have indeed charged them with inconsistency and error, but not with *folly*; nor do I believe that any forced construction of what I have alleged will warrant your assertion.†

* We ought to be obliged to Mr. Webster for so often reminding us of our duty. We do not, however, recollect any attempts, on our part, to mislead public opinion. If any thing of the kind has appeared in our Review, it was certainly unintentional.

REV.

† In saying that Mr. W. charged the federalists with "inconsistency, error, and folly," we meant to state what might in substance be fairly inferred. The paragraph on which our remark was chiefly founded is as follows:—"The proclamation of neutrality in April, 1793, was advised by the policy, and sanctioned by the deliberate approbation of the federal councils; while their opposers, with shameful solicitude, urged for the adoption of measures which would result in a war, in concert with France, against Great-Britain. In 1798, when the outrages of the French government had turned the popular current, the federalists became the advocates of war, in direct contradiction of the principles of 1793, and nearly succeeded in carrying the proposition. In the period preceding 1797, the federalists complained, and justly, of the influence which the French had obtained over American presses; but in 1797, when a professed British subject, and a declared enemy of our independence, established a Gazette in Philadelphia, the federalists opened not their mouths, but in many places gave him unusual encouragement. Anterior to the year 1798, the federalists were outrageously clamorous against every

Speaking of my Letter to the President, at the foot of the same page, you say, "The author *appears* to have followed *closely* the footsteps of Lucius Junius Brutus, another writer on the same subject." This suggestion is the less excusable, as it is founded on conjecture, and not at all necessary in its place.

The truth is, the plan of my Letter was formed, and a considerable part of it executed, before the publication of the pamphlet of Brutus. While engaged in writing my remarks, that pamphlet was received. I read it with great pleasure, which, however, was much abated by the personalities and puerilities in the last pages. It is certainly not disreputable to "follow the footsteps" of so good a writer; but I am confident that not the least addition or alteration was made in my Letter, in consequence of perusing the pamphlet of Brutus. In regard to a number of points, there is a remarkable coincidence of opinion, and similitude of observation, between us; but that part of my Letter in which this coincidence occurs, was written before I saw the pamphlet. Had you compared our writings with more care, you would have observed, that on other points our remarks are very different, and that many of the most material questions discussed in my Letter are not even glanced at by Brutus.*

Whether, in that Letter, I have departed from the temperate line of discussion recommended in the preface, is a question on which we shall probably differ. It is a question to be determined only by the *consequences* of the present system of administration, and by a tribunal which is to exist, when we, with our passions and prejudices, shall be laid asleep.

I am, Gentlemen, respectfully,

Your obedient servant,

New-Haven, August 16, 1802.

N. WEBSTER.

opposer of the executive authority, denouncing him as a jacobin and disorganizer; but the moment the President adopted a measure that displeased particular men, the federalists turned their arms against the administration. And in the pursuit of this absurd policy, if one of their friends, wishing to be consistent, and foreseeing the ruinous tendency of such measures, happened to call in question the propriety of these contradictory proceedings, they fell upon him like wild beasts, ready to tear him in pieces."

Our readers will judge whether we have misconstrued or not. For though the word folly is not used by Mr. Webster, yet, when he attaches *inconsistency* and *error*, and even *absurdity*, to the conduct of the federalists, it approaches so nearly to a charge of folly, that the difference is scarcely perceptible. REV.

* The question of *originality* we leave to be discussed between Lucius Junius Brutus and Mr. Webster.—The topics of both writers are the same, and there is a sufficient "coincidence of opinion and similitude of observation" fully to justify our general remark. It is obvious that we did not think it necessary to enter into a particular examination of Mr. Webster's performance. Had we done so, we are not certain that we should have incurred less of his displeasure. REV.

ERRATA.

P. 324, l. 33, for "this," read *the*.

P. 352, l. 15, dele "there are" before "exhibited," and insert "there are" before "many," in the next line.

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